

Whitewings[®]

ASSEMBLY INSTRUCTIONS

FLIGHT INSTRUCTIONS

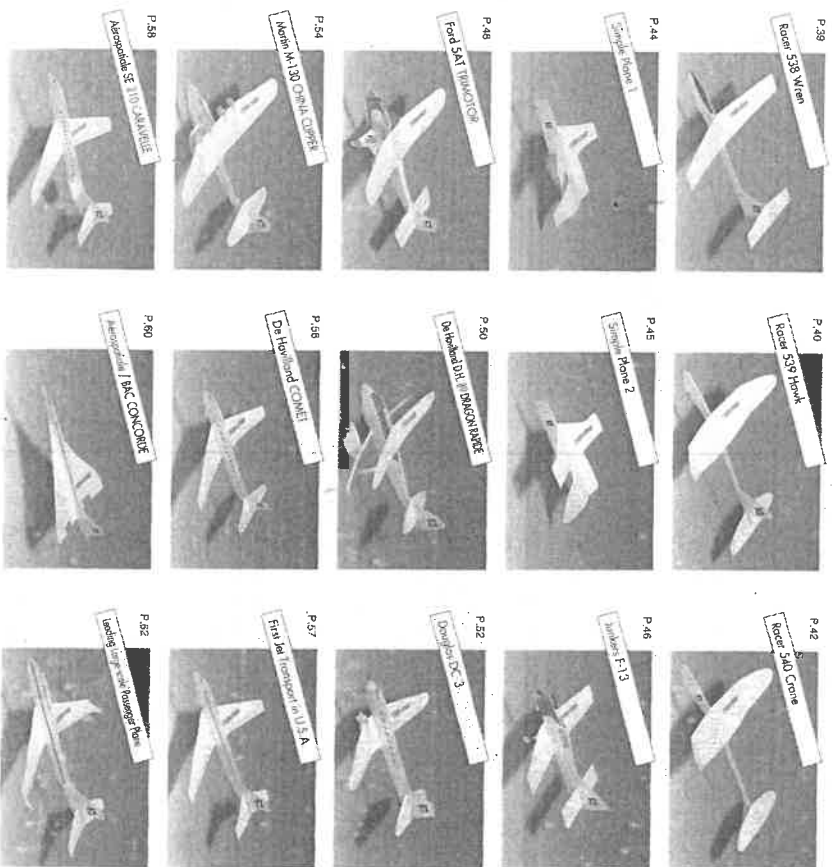
GUIDELINE FOR WHITEWINGS COMPETITION

INTRODUCTION TO PAPER PLANE DESIGN

HOW TO BUILD "WHITEWINGS"

HISTORY OF PASSENGER PLANE SERIES

HOW TO BUILD "WHITEWINGS"



4. Glue the horizontal stabilizer ⑩ onto the tab of the vertical stabilizer.

5. Place a ruler along the center line of main wing, bend each side up individually to make a dihedral angle of approximately 13° using the dihedral angle gauge.

6. Glue the main wing ⑨ + ⑩ firmly to the fuselage.

FINISHING TOUCHES

- Give the finishing touches to the plane after it dries thoroughly.
7. Camber the main wings slightly with your fingers.
8. Fold ⑫ up slightly along the center line and glue it onto the center line of the main wing.
9. Using the dihedral angle gauge, make sure the dihedral angle for the main wing is 13°.
10. View the plane from both the front and the back and straighten any warps or bends in the fuselage and the wings.

TEST FLIGHT

- Test fly the plane according to the Test Flight instructions for Regular Planes on pages 11 to 13.

[NOTE]

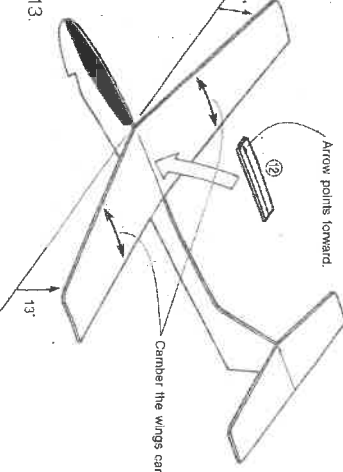
As the vertical stabilizer of the plane with T-shape horizontal stabilizer needs to be strong enough to support the horizontal stabilizer on it, this part is designed a little heavier than that of the other type of racer planes. For this reason, the fuselage might bend when the plane crash into the ground so make sure that the fuselage has no bends in it before flying it.

2. Aligning the noses flush, glue ① through ⑥ together in the order shown.

1. Fold all tabs outward.

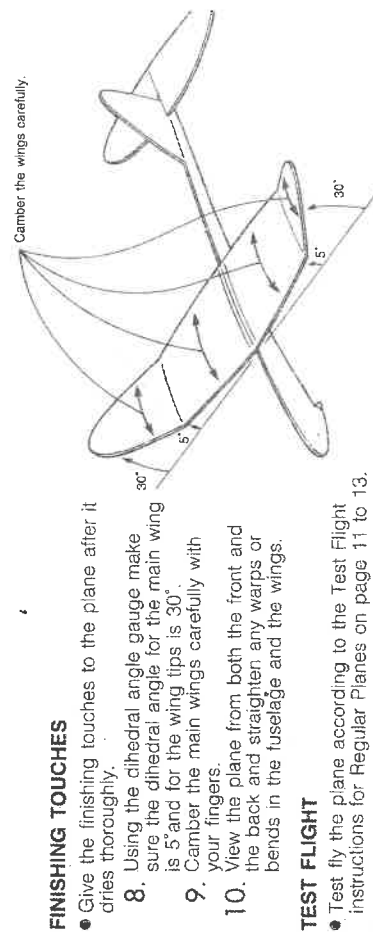
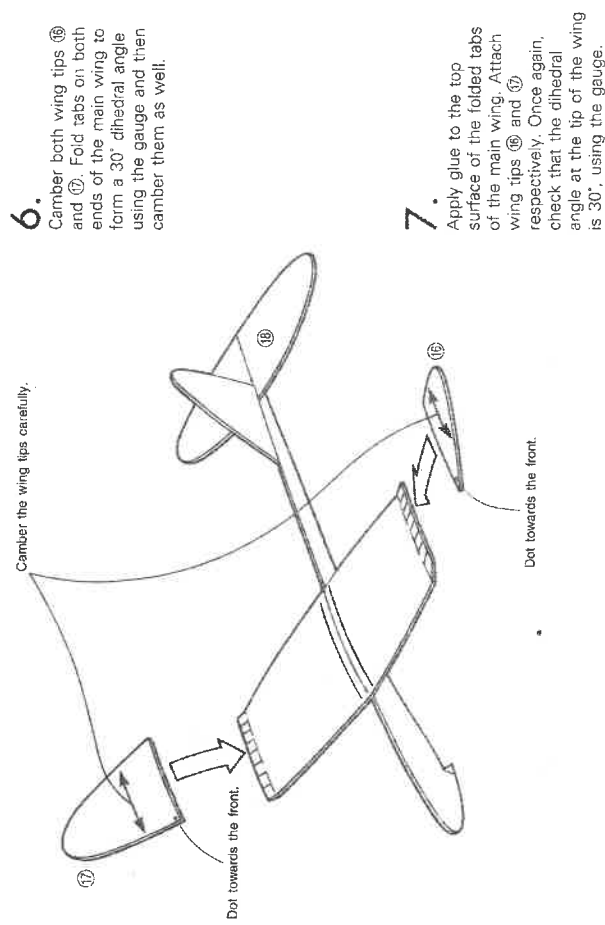
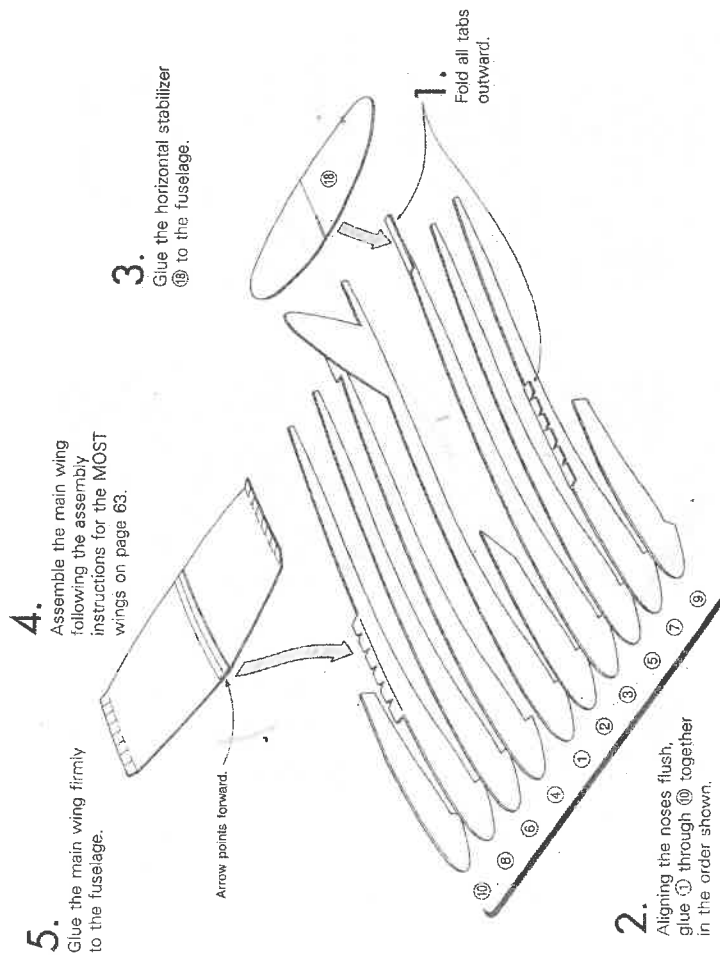
Arrow points forward.

Camber the wings can



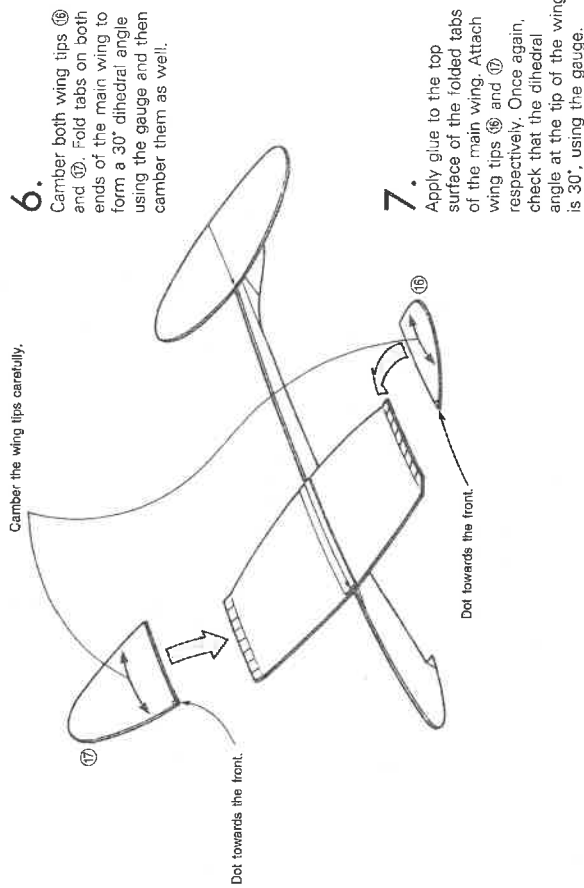
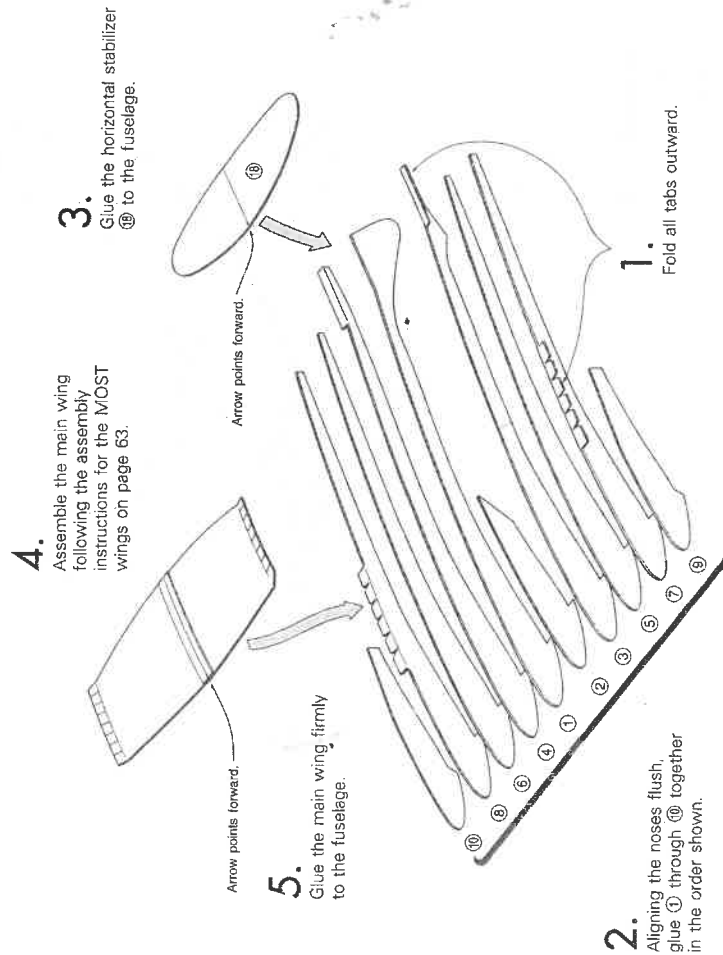
GLUING INSTRUCTIONS

Glue the parts together in the order indicated.



GLUING INSTRUCTIONS

Glue the parts together in the order indicated.

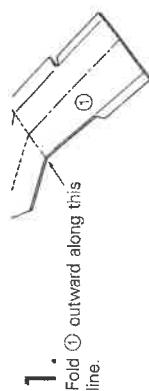


FINISHING TOUCHES

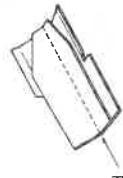
- Give the finishing touches to the plane after it dries thoroughly.
- 8. Using the dihedral angle gauge make sure the dihedral angle for the main wing is 5° and for the wing tips is 30°.
- 9. Camber the main wings carefully with your fingers.
- 10. View the plane from both the front and the back and straighten any warps or bends in the fuselage and the wings.

TEST FLIGHT

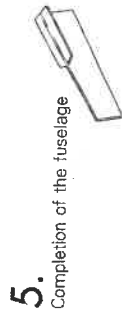
- Test fly the plane according to the Test Flight instructions for Regular Planes on page 11 to 13.



1. Fold ① outward along this line.

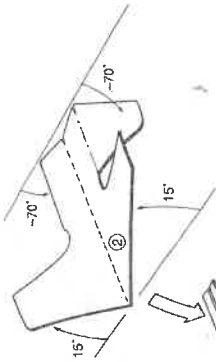


2. Turn up the folded smaller part of ① and fold it inward along the center line.



5. Completion of the fuselage

6. Placing a ruler along the center line ② and bend each side up to make a dihedral angle of 15°. (Use the angle gauge.)



7.

Bend each side of the horizontal stabilizer along the long dash and dotted line 70° downward. (Use the dihedral angle gauge.)

3. Fold both tabs on ① outside as shown.



4. Fold the protruding part over the other edge, then attach them with glue or scotch tape.

FINISHING TOUCHES

9. Before the glue dries, fix ① and ② with your fingers carefully to ensure the center lines of both ① and ② are on the straight.

10. Camber the main wing slightly with your fingers.

11. Place the angle gauge at the underside of the main wing and make sure that the dihedral angle for the main wing is 15°.

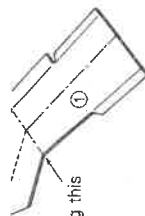
12. Bend the trailing edge of the horizontal stabilizer 0.5 – 1mm (1/50° – 1/25°) up.

13. Placing the angle gauge at the underside of the horizontal stabilizer make sure that the dihedral angle is –70°.

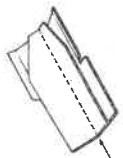
14. View the plane from the front and the back and straighten any warps or bends in the fuselage and the wings.

TEST FLIGHT

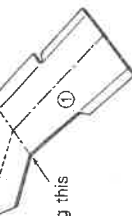
● Test fly the plane according to the Test Flight instructions for Regular Planes on page 11 to 13.



1. Fold ① outward along this line.

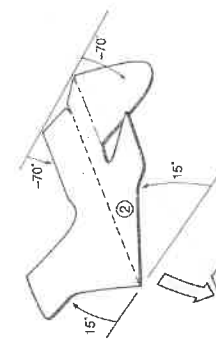


2. Turn up the folded smaller part of ① and fold it inward along the center line.



5. Completion of the fuselage

6. Placing a ruler along the center line ② and bend each side up to make a dihedral angle of 15°. (Use the angle gauge.)



7.

Bend each side of the horizontal stabilizer along the long dash and dotted line 70° downward. (Use the dihedral angle gauge.)

3. Fold both tabs on ① outside as shown.



4. Fold the protruding part over the other edge, then attach them with glue or scotch tape.

FINISHING TOUCHES

9. Before the glue dries, fix ① and ② with your fingers carefully to ensure the center lines of both ① and ② are on the straight.

10. Camber the main wing slightly with your fingers.

11. Place the angle gauge at the underside of the main wing and make sure that the dihedral angle for the main wing is 15°.

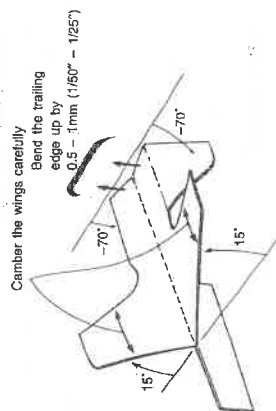
12. Bend the tips of the horizontal stabilizer 0.5 – 1mm (1/50° – 1/25°) up.

13. Placing the angle gauge at the underside of the horizontal stabilizer make sure that the dihedral angle is –70°.

14. View the plane from the front and the back and straighten any warps or bends in the fuselage and the wings.

TEST FLIGHT

● Test fly the plane according to the test flight instructions for Regular Planes on pages 11 to 13.



8.

Spread glue on the tabs on ① and attach them to the underside of the front end of ②

Camber the wings carefully. Bend the trailing edge up by 0.5 – 1mm (1/50° – 1/25°)

features an open design for pilots to gain headwinds in their favor. The projecting horn on the plane nose is the exhaust pipe for the engine.

GLUING INSTRUCTIONS

Glue the parts together in the order indicated.

3. Cut out the slit on part ① into which the horizontal stabilizer will be inserted.



2. Fold all tabs outward.



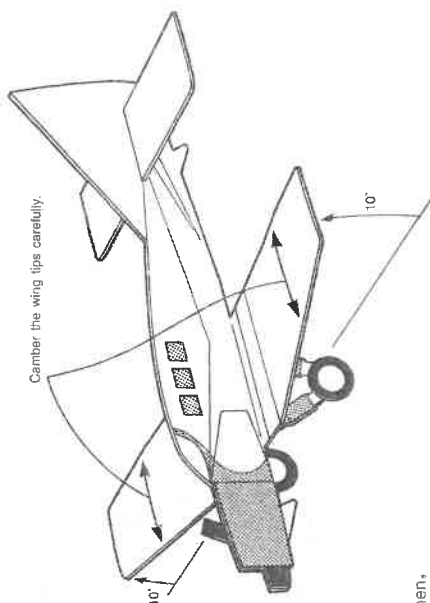
9. Using the landing gear gauge, fold landing gear parts ⑮, ⑯, and ⑰ respectively as shown in the figures. Then, glue ⑮ to the underside of ⑬ and glue ⑰ to the underside of ⑮ aligning their front edges.

10. Aligning the front edge of the landing gear ⑮ + ⑯ + ⑰ and that of the main wing, glue the landing gear to the underside of the main wing. Make sure that the center line of the main wing and the cut of the landing gear meet each other.

11. Glue together ⑮ and ⑯, and ⑰ to assemble wheels. (Make sure that each printed side can be seen.) Then, as shown in the figure, glue the wheels to the landing gear respectively, aligning the center of the tab with the center of the wheels.

Place a ruler along right and left lines on the main wing. Using a dihedral angle gauge, make a dihedral angle of 10°.

Referring to INSTRUCTIONS on page 50, draw the center line on the underside of the main wing ⑬ + ⑭.



8. Glue the main wing ⑬ + ⑭ firmly to the fuselage aligning their center lines.

4. Glue ⑬ to the underside of ⑫. When dry, cut off the protruding portions.

FINISHING TOUCHES

- Give the finishing touches to the plane after it dries thoroughly.
- 12. Camber the wing tips which have a dihedral angle carefully with your fingers.
- 13. Placing the dihedral angle gauge at the underside of the main wing, check the dihedral angle for 10°.
- 14. Placing the gear gauge at the underside of the gear, make sure that the proper degrees are set.
- 15. View the plane from both the front and the back and straighten any warps or bends in the fuselage and wings.

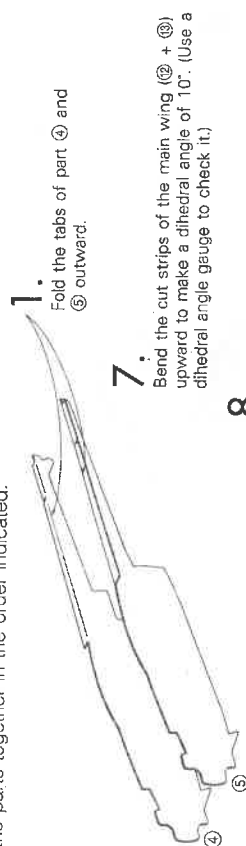
TEST FLIGHT

- Test fly the plane according to the Test Flight instructions for Regular Planes on pages 11 to 13.

by professor Junkers. The 5AT, a larger plane with an engine utilizing more horse power, made its maiden voyage in 1928. More than 100 of the planes were produced and these Ford 5AT TRIMOTOR aircraft are still being used today in charter sightseeing service in the USA.

GLUING INSTRUCTIONS

Glue the parts together in the order indicated.

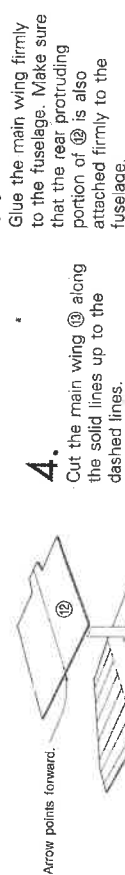


1. Fold the tabs of part 4 and 5 outward.

7. Bend the cut strips of the main wing (2 + 3) upward to make a dihedral angle of 10°. (Use a dihedral angle gauge to check it.)

8. Camber the main wing (2 + 3) after the curve of its gluing position on the fuselage.

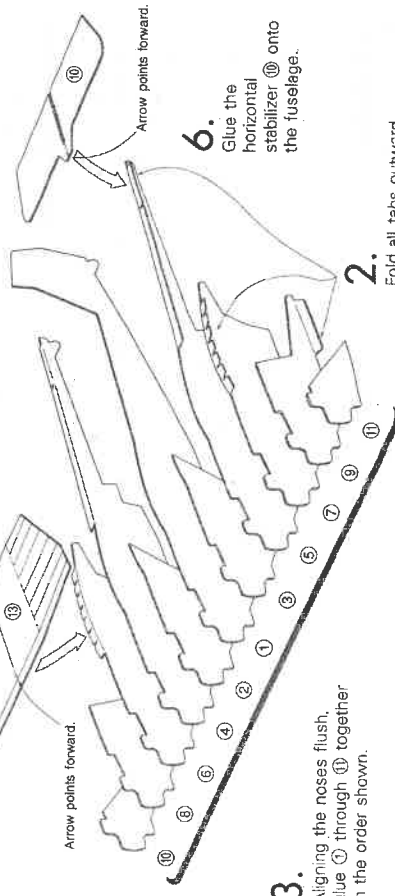
5. Glue 12 to the underside of 13 aligning their center lines. When dry, cut off the protruding portion of 13.



Arrow points forward.

9. Glue the main wing firmly to the fuselage. Make sure that the rear protruding portion of 13 is also attached firmly to the fuselage.

4. Cut the main wing 13 along the solid lines up to the dashed lines.



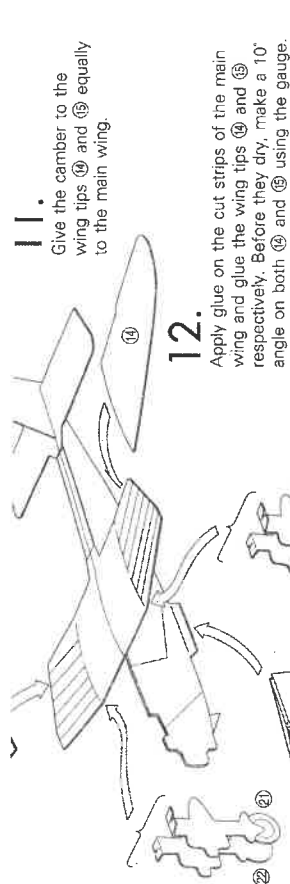
Arrow points forward.

Arrow points forward.

6. Glue the horizontal stabilizer 10 onto the fuselage.

3. Aligning the noses flush, glue 1 through 11 together in the order shown.

2. Fold all tabs outward.



11.

Give the camber to the wing tips 14 and 15 equally to the main wing.

12.

Apply glue on the cut strips of the main wing and glue the wing tips 14 and 15 respectively. Before they dry, make a 10° angle on both 14 and 15 using the gauge.

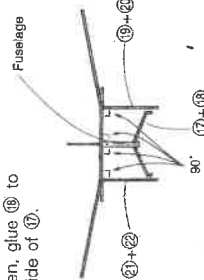
15.

Fold the upper tabs of the landing gear 19, 20, 21 and 22. Glue 19 and 20, 21 and 22 together. Then, glue the tabs of the two landing gears to the underside of the main wing. Apply each of them respectively to the front edge of the joint portion of the main wing and the wing tip.

14. Glue 17 + 18 to the underside of the fuselage aligning the front and back notches of 17 + 18 with the center of the fuselage.

13.

Fold parts 17 and 18, as shown. Then, glue 18 to the underside of 17.



16.

View the plane from the front and adjust the fuselage and the gears so that they form a 90° angle at the main wing. Then, glue the tabs of 17 + 18 respectively to the inner sides of the gears 19 + 20 and 21 + 22.

FINISHING TOUCHES

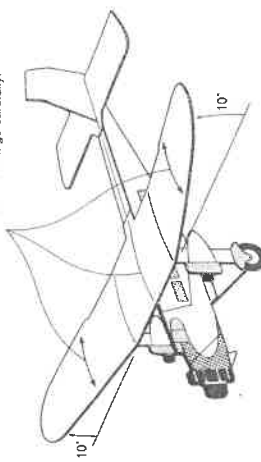
Give the finishing touches to the plane after it dries thoroughly.

17. Camber the wings carefully with your fingers.

18. Using the dihedral angle gauge, make sure the dihedral angle for the main wing is 10°.

19. View the plane from the front and the back and straighten any warps or bends in the fuselage and wings.

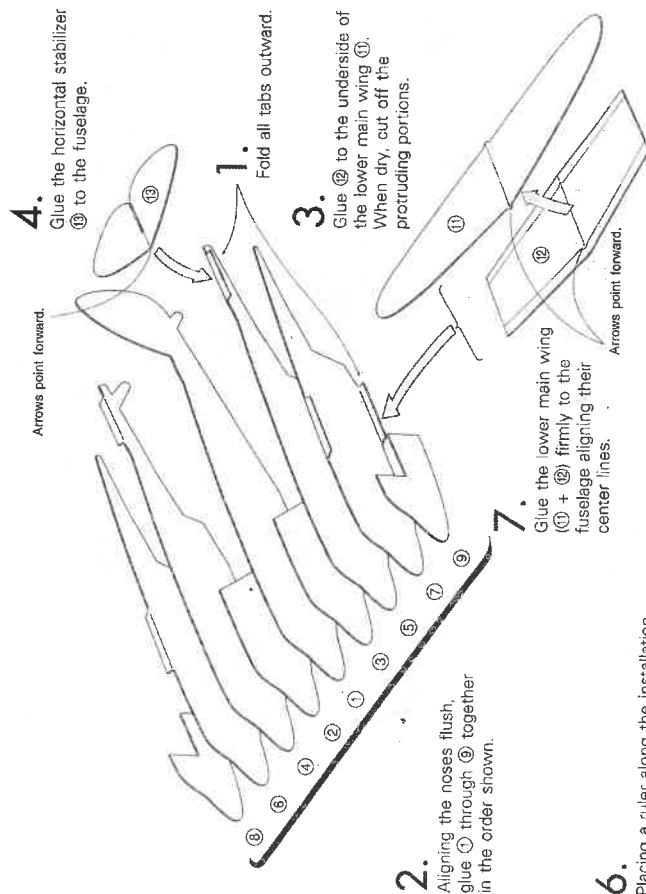
Camber the wings carefully.



TEST FLIGHT

Test fly the plane according to the Test Flight instructions for Regular Planes on pages 11 to 13.

Join the parts together in the order indicated.



4. Glue the horizontal stabilizer (13) to the fuselage.

1. Fold all tabs outward.

3. Glue (12) to the underside of the lower main wing (11). When dry, cut off the protruding portions.

2. Aligning the noses flush, glue (1) through (9) together in the order shown.

7. Glue the lower main wing (11) + (12) firmly to the fuselage aligning their center lines.

6. Placing a ruler along the installation lines on the main wing, make a dihedral angle of 8° for both sides of the main wing. (Use the dihedral angle gauge.)

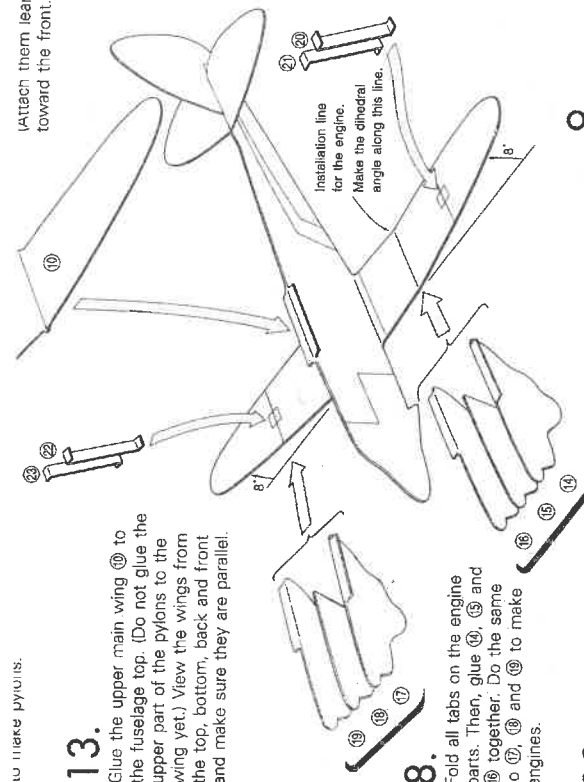
5. Draw a center line on the underside of the lower main wing (11) + (12). (Refer to [NOTE].)

[NOTE]

Make pinholes at both ends of the main wing. Turn the main wing over. Link the pinholes together with a ruler and draw a center line on the unprinted side of the main wing.

to make pylons.

(Attach them leaning slightly toward the front.)



13. Glue the upper main wing (10) to the fuselage top. (Do not glue the upper part of the pylons to the wing yet.) View the wings from the top, bottom, back and front and make sure they are parallel.

8. Fold all tabs on the engine parts. Then, glue (10), (15) and (16) together. Do the same to (17), (18) and (19) to make engines.

12. Placing a ruler along the center line of the upper main wing (10), make a dihedral angle.

9. Attach those engines to the underside of the lower main wing aligning with the installation lines.

FINISHING TOUCHES

- Give the finishing touches to the plane after it dries thoroughly.
- Camber both the upper and the lower main wings slightly with your fingers.
- Using the dihedral angle gauge, make sure the dihedral angle for the lower main wing is 8°.
- View the plane from both the front and the back and straighten any warps or bends in the fuselage and the wings.

TEST FLIGHT

- Test fly the plane according to the Test Flight instructions for Regular Planes on pages 11 to 13.

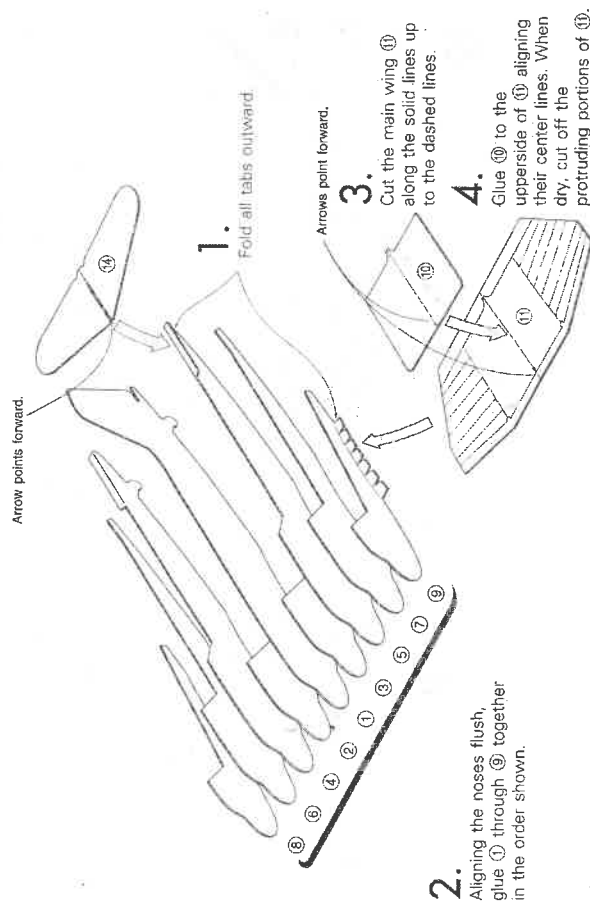


14. View the plane from the front to check that the fuselage and the pylons are parallel. Then, glue the top part of the pylons to the underside of the upper main wing.

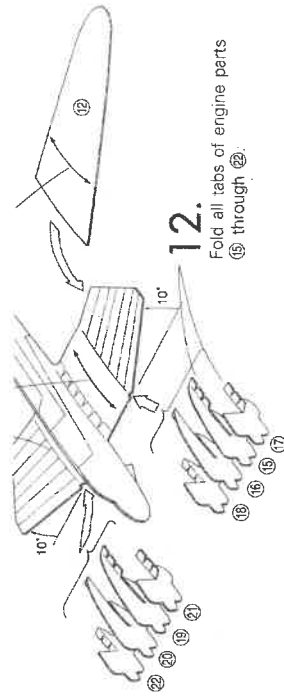
high quality and economical efficiency. An unprecedented production of more than 10,000 planes were made for civilian and military transport use.

GLUING INSTRUCTIONS

Glue the parts together in the order indicated.



RIGHT ORIGINALLY



FINISHING TOUCHES

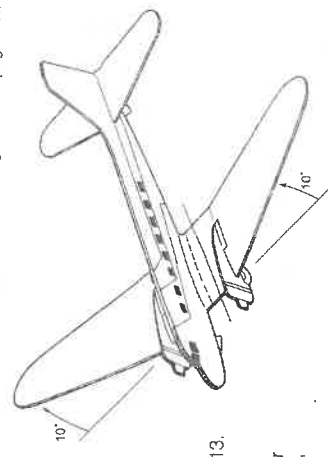
14. Slide the assembled engine onto the main wing. Put the left and right engines respectively onto the front notches of the joint portion of the main wing and the wing tips. Then, attach both engines to the main wing with glue.

TEST FLIGHT

10. Camber the wing tips ⑫ and ⑬ equally to the main wing. Refer to Figure 1 on page 10. It is very important to camber the entire main wing evenly from the root to both edges so that it generates the equal angle of setting from the wing root to both edges. (The dashed line in the figure 1 on page 10 shows an inappropriate camber which creates different angles of settings between the wing root and both edges.)

TEST FLIGHT

11. Apply glue on the cut strips of the main wing and glue the wing tips ⑫ and ⑬ respectively. Before they dry, make a 10° angle on both ⑫ and ⑬ using the gauge. Additionally, adjust the angle of setting evenly from the wing root to both edges. (Refer to Figure 1 on page 10.)



TEST FLIGHT

16. Using the dihedral angle gauge, check that the dihedral angle of the wings tips is 10°.

17. View the plane from both the front and the back and straighten any warps or bends in the fuselage and the wing.

Test fly the plane according to the Test Flight instructions for Regular Planes on pages 11 to 13. When test flying your plane, observe its flight carefully. In the case that the plane tends to circle slightly, remember if it turns to the right or to the left. When you want this plane to fly high, launch the plane tilting it to the direction the plane circled so that it climbs up higher for an excellent flight.

and "PHILIPPINE CLIPPER" began scheduled service across the Pacific Ocean in 1936. This transpacific service proved that a large flying boat with multi-engines were well suited in those days to the routes crossing the Pacific Ocean.

GLUING INSTRUCTIONS

Glue the parts together in the order indicated

3. Assemble the sponson.

3-1 Fold ⑩ outward along the center line and fold all tabs outward. As a result, all the tabs will be facing outward.

3-2 Swell the inside of the two folds of ⑩. Then spread glue on the shaded portion as shown in the figure and glue the part together to complete its bag shape.

3-3 Insert a pencil into the sponson and swell it again to make it into a streamline shape.

3-4 Assemble part ③ in the same manner.

1. Fold all tabs outward.

2. Aligning the noses flush, glue ① through ⑪ together in the order shown.

4. Glue the sponson ⑩ to the printed box ⑩ to the left side of the fuselage. Glue the sponson ⑩ to the printed box on the right side of the fuselage.

6. Cut part ⑭ along the solid lines up to the dashed lines.

7. Glue ⑬ to the upper side of ⑭. When dry, cut off the protruding portions.

9. Placing a ruler along the dashed line on both edges of the main wing (⑬ + ⑭), bend the strips upward to make a dihedral angle of 10°.

10. Camber the main wing (⑬ + ⑭) after the curve of its gluing position on the fuselage.

11. Glue the main wing firmly to the fuselage.

8. Glue the horizontal stabilizer ⑮ to the fuselage.

12. According to the curve of the gluing position for the main wing on the fuselage, camber the main wing (⑬ + ⑭) evenly up to both edges. Make sure that the dihedral angle for the folded tabs are 10°.

Camber the wing tips carefully. Dot towards the front.

17.

Using the engine installation lines and cuts on the main wing as a guide, glue the four engines to the main wing.

13.

Camber both wing tips ⑮ and ⑯ equally to the main wing.

Dot towards the front.

14.

Apply glue to the top surface of the folded tabs of the main wing and attach wing tips ⑮ and ⑯ respectively. Before it dries, adjust the dihedral angles of ⑮ and ⑯ to 10°. (Use the dihedral angle gauge.)

Camber the wing tips carefully.

Camber the wings carefully.

FINISHING TOUCHES

● Give the finishing touches to the plane after it dries thoroughly.

18 Adjust the camber of both the main wing and the wing tips carefully with your fingers.

19. Using the dihedral angle gauge, check again that the dihedral angle of the main wing is 10°.

20. View the plane from both the front and the back and straighten any warps or bends in the fuselage and the wings.

TEST FLIGHT

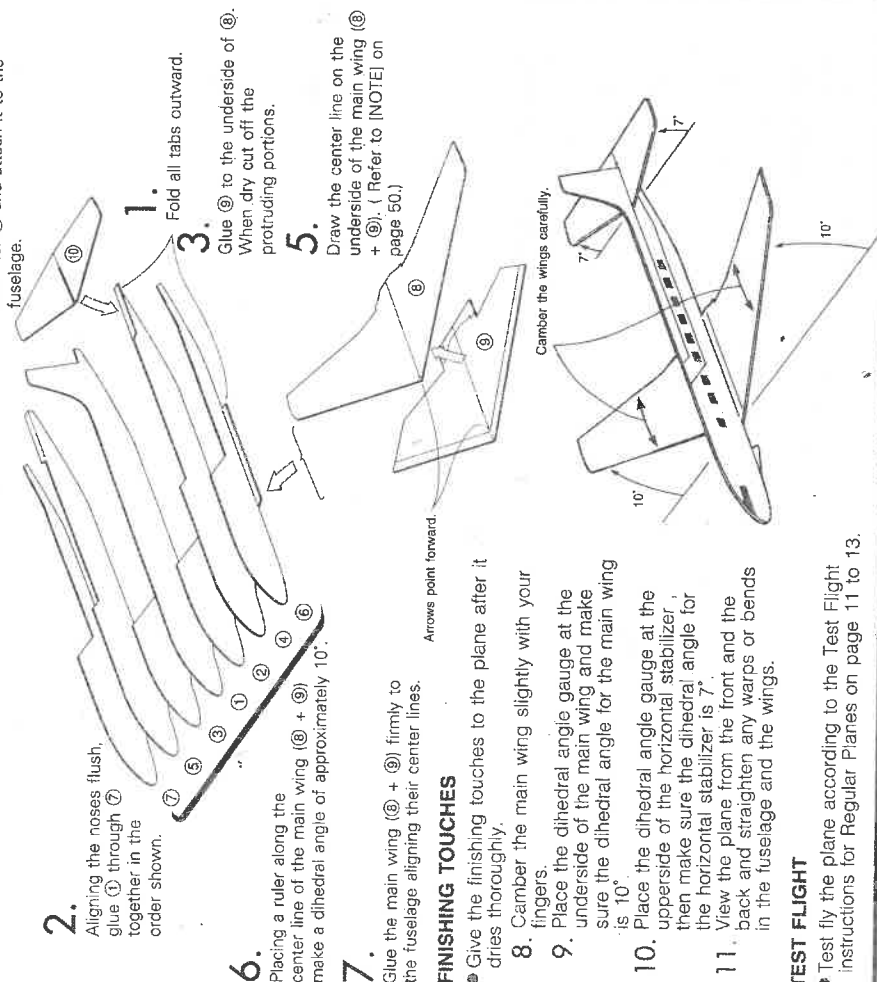
● Test fly the plane according to the Test Flight instructions for Regular Planes on pages 11 to 13.

However, accidents occurred two years later when planes experienced in-flight disintegration twice. After a large-scaled investigation, it was revealed that the accidents were caused by a fatigue fracture of the pressurized cabin. COMET 4 was produced with a built-in countermeasure to prevent fatigue fracture of the pressurized cabin. This led to the improved design, stronger construction and the testing practice for all transport planes with pressurized cabins.

GLUING INSTRUCTIONS

Glue the parts together in the order indicated.

2. Aligning the noses flush, glue ① through ⑦ together in the order shown.
4. Using the dihedral angle gauge, make a dihedral angle of approximately 7° on the horizontal stabilizer ⑩ and attach it to the fuselage.
6. Placing a ruler along the center line of the main wing ⑧ + ⑨, make a dihedral angle of approximately 10°.
7. Glue the main wing ⑧ + ⑨ firmly to the fuselage aligning their center lines.
8. Camber the main wing slightly with your fingers.
9. Place the dihedral angle gauge at the underside of the main wing and make sure the dihedral angle for the main wing is 10°.
10. Placing the dihedral angle gauge at the underside of the horizontal stabilizer, then make sure the dihedral angle for the horizontal stabilizer is 7°.
11. View the plane from the front and the back and straighten any warps or bends in the fuselage and the wings.



FINISHING TOUCHES

- Give the finishing touches to the plane after it dries thoroughly.
- 8. Camber the main wing slightly with your fingers.
- 9. Place the dihedral angle gauge at the underside of the main wing and make sure the dihedral angle for the main wing is 10°.
- 10. Placing the dihedral angle gauge at the underside of the horizontal stabilizer, then make sure the dihedral angle for the horizontal stabilizer is 7°.
- 11. View the plane from the front and the back and straighten any warps or bends in the fuselage and the wings.

TEST FLIGHT

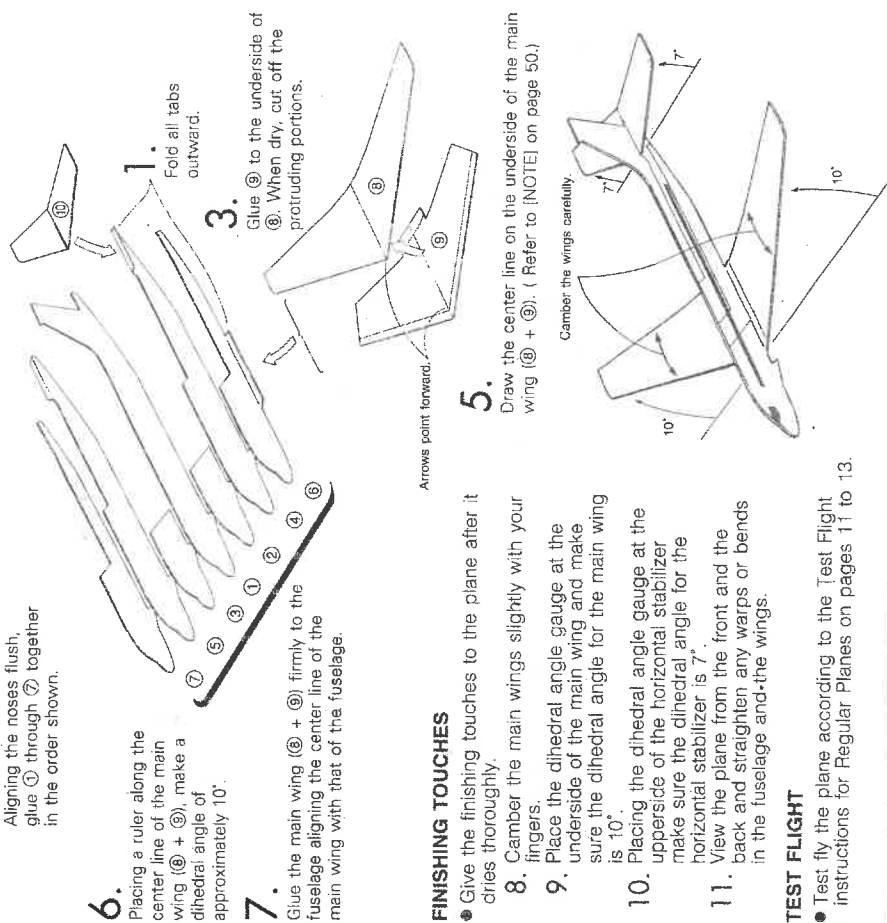
- Test fly the plane according to the Test Flight instructions for Regular Planes on page 11 to 13.

the main wing and suppress of wing flutter. Based on this technology, Boeing developed the jet tanker KC-135 and furthermore put the first passenger jet, the Boeing 707, in practical use in the U.S.A. (First flight in 1954) This passenger jet, compared to planes with reciprocating engines, resulted in flights at twice the speed and payload capacity. That is, almost four times in transport effectiveness.

GLUING INSTRUCTIONS

Glue the parts together in the order indicated.

2. Aligning the noses flush, glue ① through ⑦ together in the order shown.
4. Using the dihedral angle gauge, make a dihedral angle of 7° on the stabilizer ⑩. Then glue it to the fuselage.
6. Placing a ruler along the center line of the main wing ⑧ + ⑨, make a dihedral angle of approximately 10°.
7. Glue the main wing ⑧ + ⑨ firmly to the fuselage aligning the center line of the main wing with that of the fuselage.
8. Camber the main wings slightly with your fingers.
9. Place the dihedral angle gauge at the underside of the main wing and make sure the dihedral angle for the main wing is 10°.
10. Placing the dihedral angle gauge at the underside of the horizontal stabilizer make sure the dihedral angle for the horizontal stabilizer is 7°.
11. View the plane from the front and the back and straighten any warps or bends in the fuselage and the wings.



FINISHING TOUCHES

- Give the finishing touches to the plane after it dries thoroughly.
- 8. Camber the main wings slightly with your fingers.
- 9. Place the dihedral angle gauge at the underside of the main wing and make sure the dihedral angle for the main wing is 10°.
- 10. Placing the dihedral angle gauge at the underside of the horizontal stabilizer make sure the dihedral angle for the horizontal stabilizer is 7°.
- 11. View the plane from the front and the back and straighten any warps or bends in the fuselage and the wings.

TEST FLIGHT

- Test fly the plane according to the Test Flight instructions for Regular Planes on pages 11 to 13.

coming from the CARAVELLE or the engine pod with pylons on the front edges of the main wing that were used in Boeing B-47 and 707.

GLUING INSTRUCTIONS

Glue the parts together in the order indicated.

View from the front

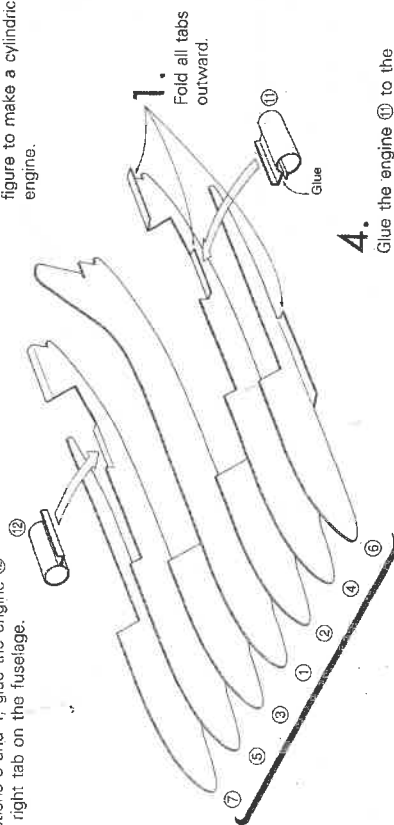
Glue

Fuselage

3. Fold the dashed lines of ⑪ inside. Then, make the center portion into a round shape and glue the tabs together shown in the figure to make a cylindrical engine.

5.

In the same manner mentioned in Instructions 3 and 4, glue the engine ⑫ to the right tab on the fuselage.



2.

Aligning the noses flush, glue ① through ⑦ together in the order shown.

4.

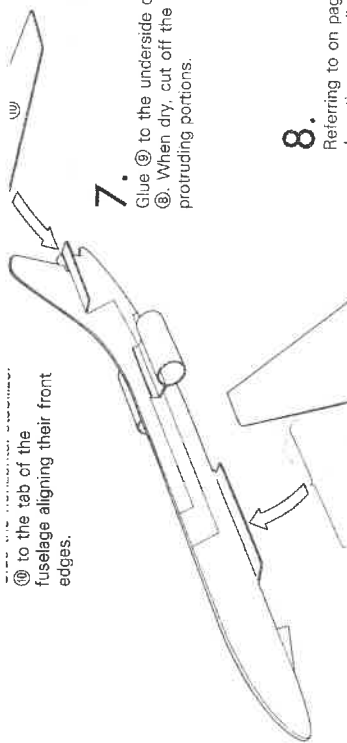
Glue the engine ⑪ to the left tab on the fuselage.

1.

Fold all tabs outward.

Glue

⑩ to the tab of the fuselage aligning their front edges.



7.

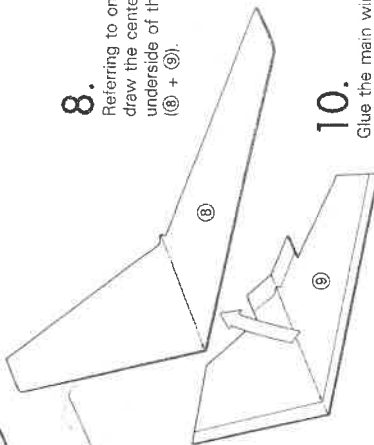
Glue ⑨ to the underside of ⑩. When dry, cut off the protruding portions.

8.

Referring to on page 50, draw the center line on the underside of the main wing (⑧ + ⑨).

9.

Place a ruler along the center line of the main wing and bend each side up individually to make a dihedral angle of 10°.



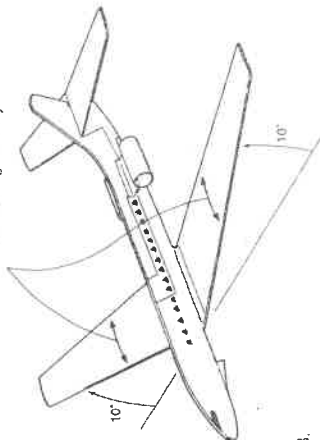
10.

Glue the main wing firmly to the fuselage aligning their center lines.

FINISHING TOUCHES

- Give the finishing touches to the plane after it dries thoroughly.
- 11. Camber the main wing slightly with your fingers.
- 12. Placing the dihedral angle gauge on the underside of the main wing, make sure the dihedral angle for the main wing is 10°.
- 13. View the plane from the front and the back and straighten any warps or bends in the fuselage and wings.

Camber the wings carefully.



TEST FLIGHT

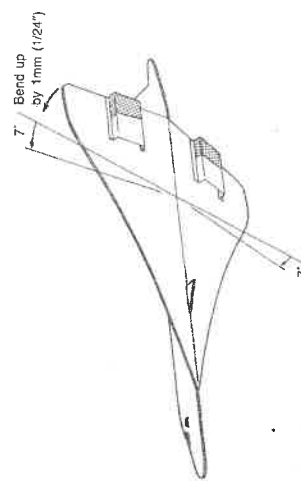
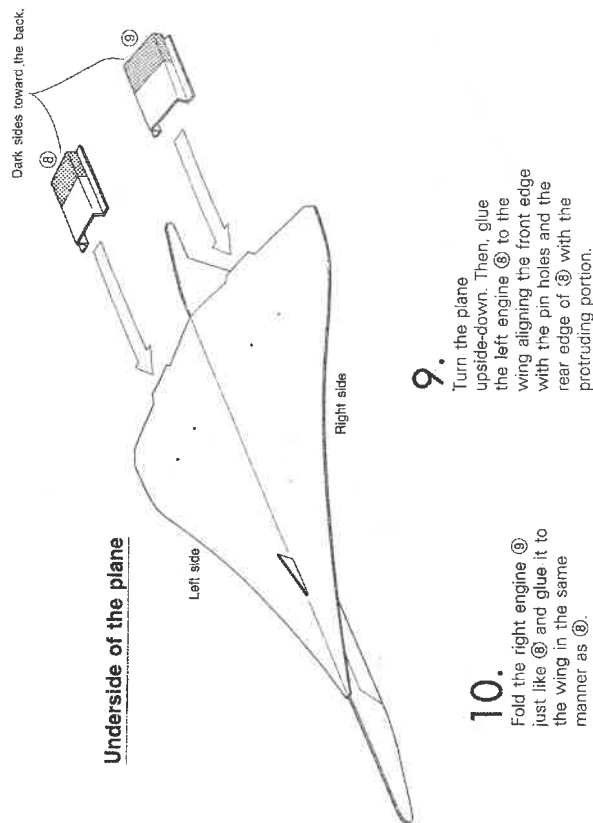
- Test fly the plane according to Test Flight instructions for Regular Planes on pages 11 to 13.

produced, the CONCORDE service by British Airway and Air France have continued without accident, and carrying as many as 144 passengers.

GLUING INSTRUCTIONS

Glue the parts together in the order indicated.

1. Fold all tabs outward.
2. Aligning the noses flush, glue ① through ⑥ together in the order shown.
3. Draw the center line on the unprinted side of the wing ⑦. (Refer to on page 50.)
4. Arrow points forward. Cut out a slit on the wing ⑦. (Use a cutter.)
5. Make pinholes at 4 dots on the printed side of the wing ⑦ so that the pinholes are visible from the unprinted side.
6. Place a ruler along the center line of the wing ⑦ and make a dihedral angle of 7° using the dihedral angle gauge.
7. Spread glue on the tabs on the fuselage. Then, glue the wing ⑦ to the underside of the fuselage in inserting the hook for the catapult into the slit. Make sure to align the center line of the wing with that of the fuselage.



FINISHING TOUCHES

- Give the finishing touches to the plane after it dries thoroughly.
- 11. Place the dihedral angle gauge at the underside of the wing and make sure the dihedral angle of the wing is 7°.
- 12. Bend both trailing edges of the wing up by approximately 1mm (1/24"). Do not forget this or the plane won't fly.
- 13. View the plane from both the front and the back and straighten any warps or bends in the fuselage and the wing.

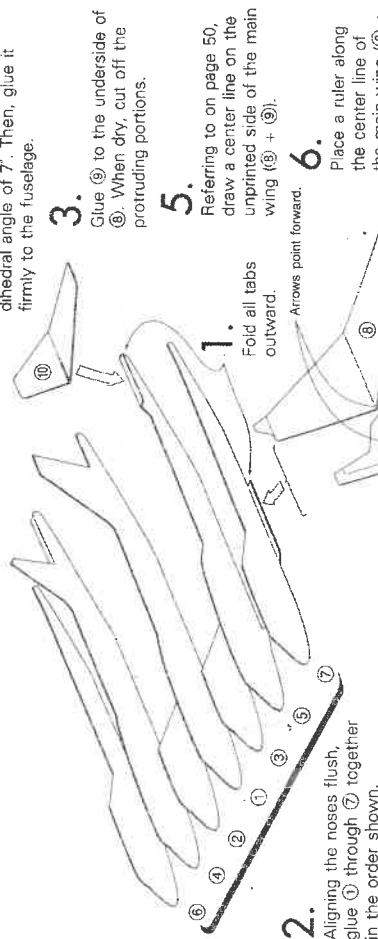
TEST FLIGHT

- Test fly the plane according to the Test Flight instructions for Delta Wing Planes on page 13.

latest model 747-400, some improvements were made. The most conspicuous change in appearance is the winglet at the edge of the wing that extends flight range. Instead of mechanical indicators, in addition, the improvement of computers and CRT was introduced in the cockpit to operate the plane more economically with 2 pilots.

GLUING INSTRUCTIONS

Glue the parts together in the order indicated.



2.

Aligning the noses flush, glue ① through ⑦ together in the order shown.

FINISHING TOUCHES

• Give the finishing touches to the plane after it dries thoroughly.

8. Camber the main wing slightly with your fingers.

9. Placing the dihedral angle gauge at the underside of the main wing, make sure the dihedral angle of the main wing is 10°.

10. Place the gauge at the edges of the main wing and check that the dihedral angle of the winglets are 65° against the main wing.

11. Placing the dihedral angle gauge at the upper side of the horizontal stabilizer, make sure that the dihedral angle is 7°.

12. View the plane from the front and the back and straighten any warps or bends in the fuselage and wings.

TEST FLIGHT

• Test fly the plane according to the Test Flight instruction for Regular Planes on pages 11 to 13.

4.

Place a ruler along the center line of the horizontal stabilizer ⑩ and make a dihedral angle of 7°. Then, glue it firmly to the fuselage.

3.

Glue ⑨ to the underside of ⑧. When dry, cut off the protruding portions.

5.

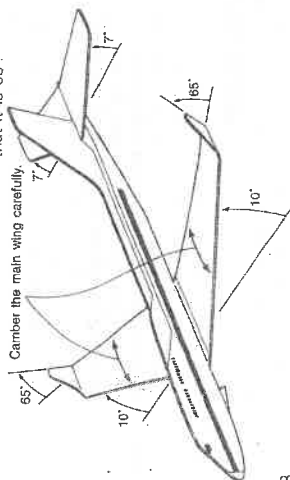
Referring to on page 50, draw a center line on the unprinted side of the main wing (⑩ + ③).

6.

Place a ruler along the center line of the main wing (⑩ + ③), and make a dihedral angle of 10° using the dihedral angle gauge. Additionally, fold both edges of the main wing (winglets) upward and raise them to 65°. Use the gauge to check that it is 65°.

7.

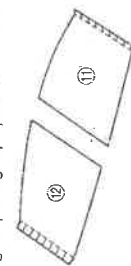
Glue the main wing to the fuselage aligning their center lines.



wing. Because the shape of the central part of the wing resembles a so-called saddle shaped surface in math, I call this type of wing a MOST (Modified Saddle Type) wing. It is constructed as follows.

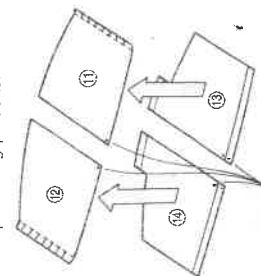
1.

Cut parts ⑪ and ⑫ along the solid lines up to the dashed lines. Then placing a ruler along the dashed line, bend the resulting strips slightly upward.



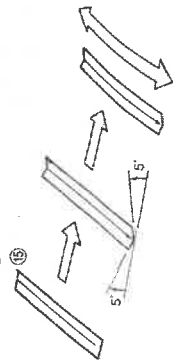
2.

Glue parts ⑬ and ⑭ to the underside of parts ⑪ and ⑫ respectively. When dry, cut off the protruding portions.

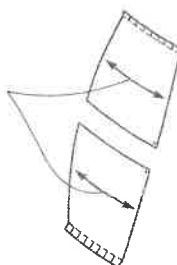


3.

Using a ruler along the center line, fold part ⑮ from the center line to make 5° angle on both sides. Then curve it carefully with your fingers to fit the curved fuselage top where the main wings are to be attached.

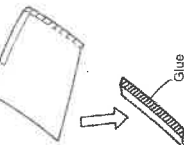


Use same manner as ③.
This curve is called camber.



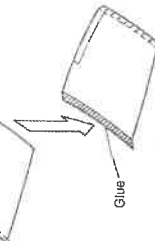
5.

Apply glue on half of the underside of ⑮ and glue onto ⑫ + ⑭. (The arrow should point toward the dot.)



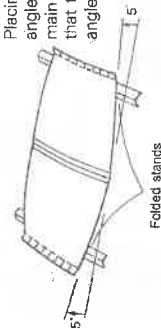
6.

In the same manner as in 4-5, attach ⑮ + ⑬ to the other side of ⑮.



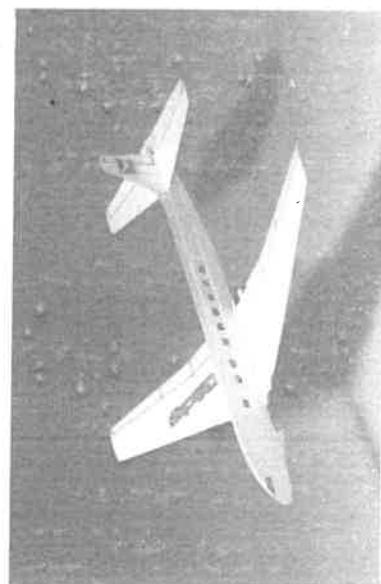
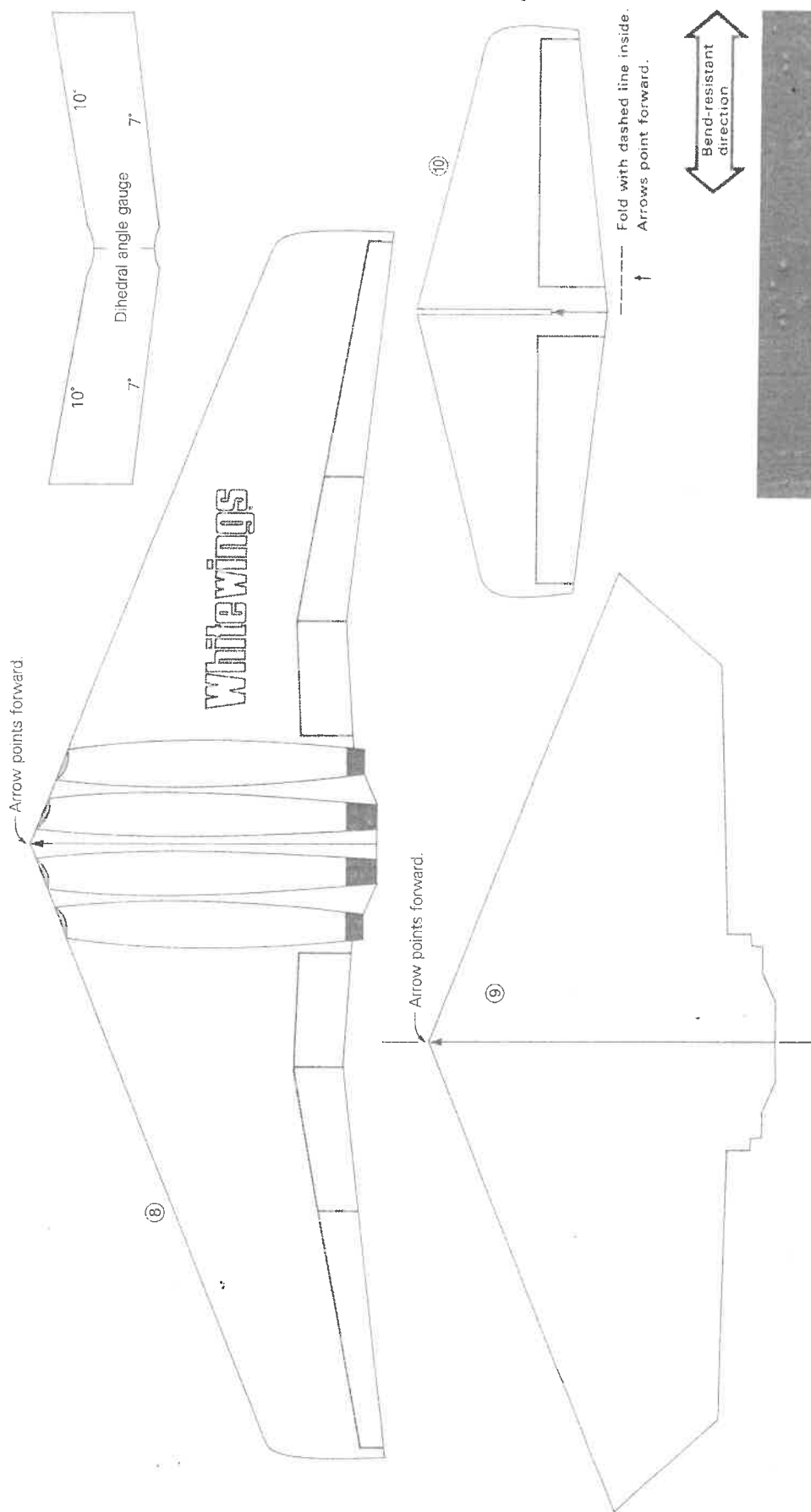
7.

Placing the dihedral angle gauge on the main wing check that the dihedral angle is 5°.



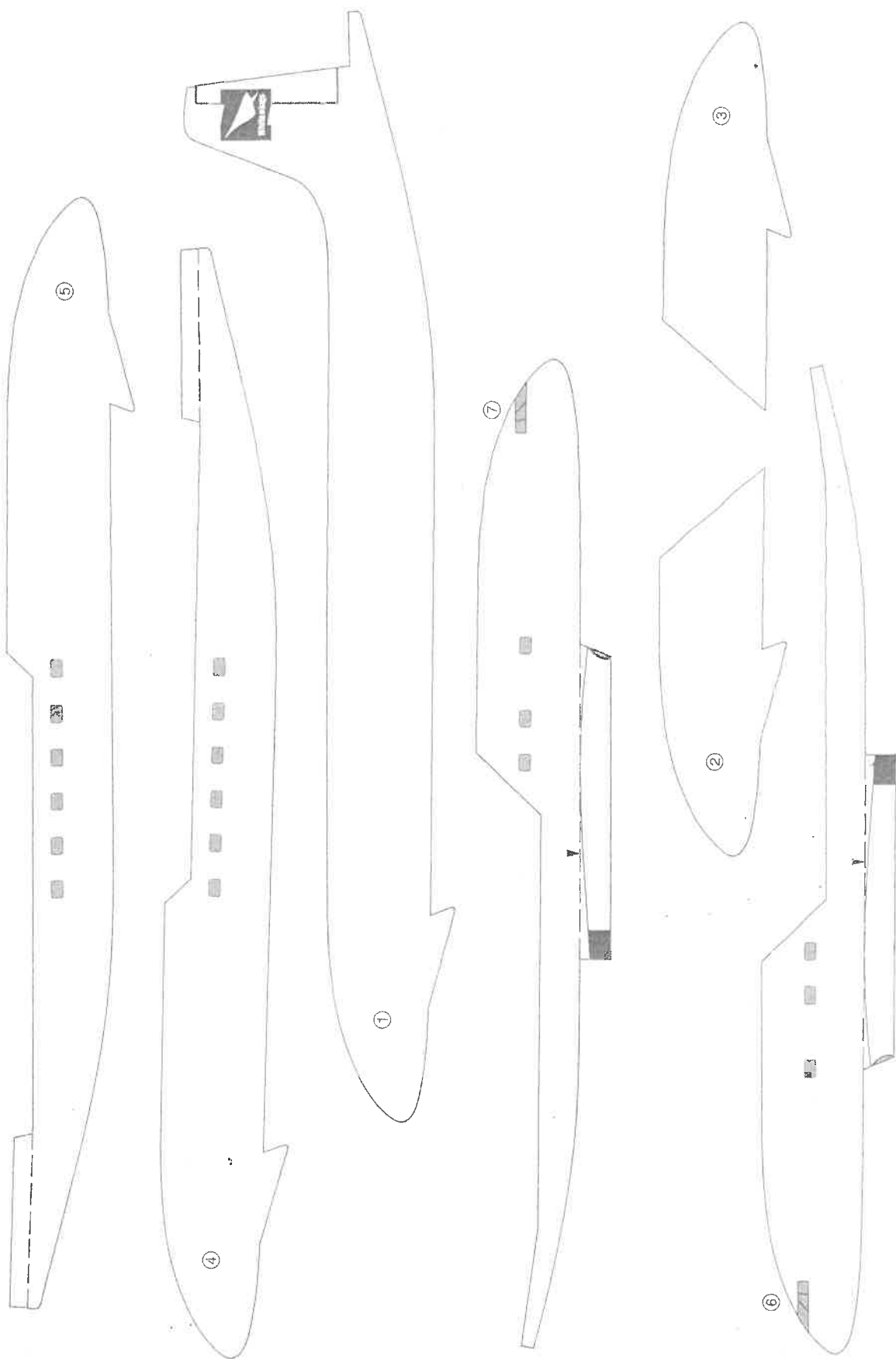
8.

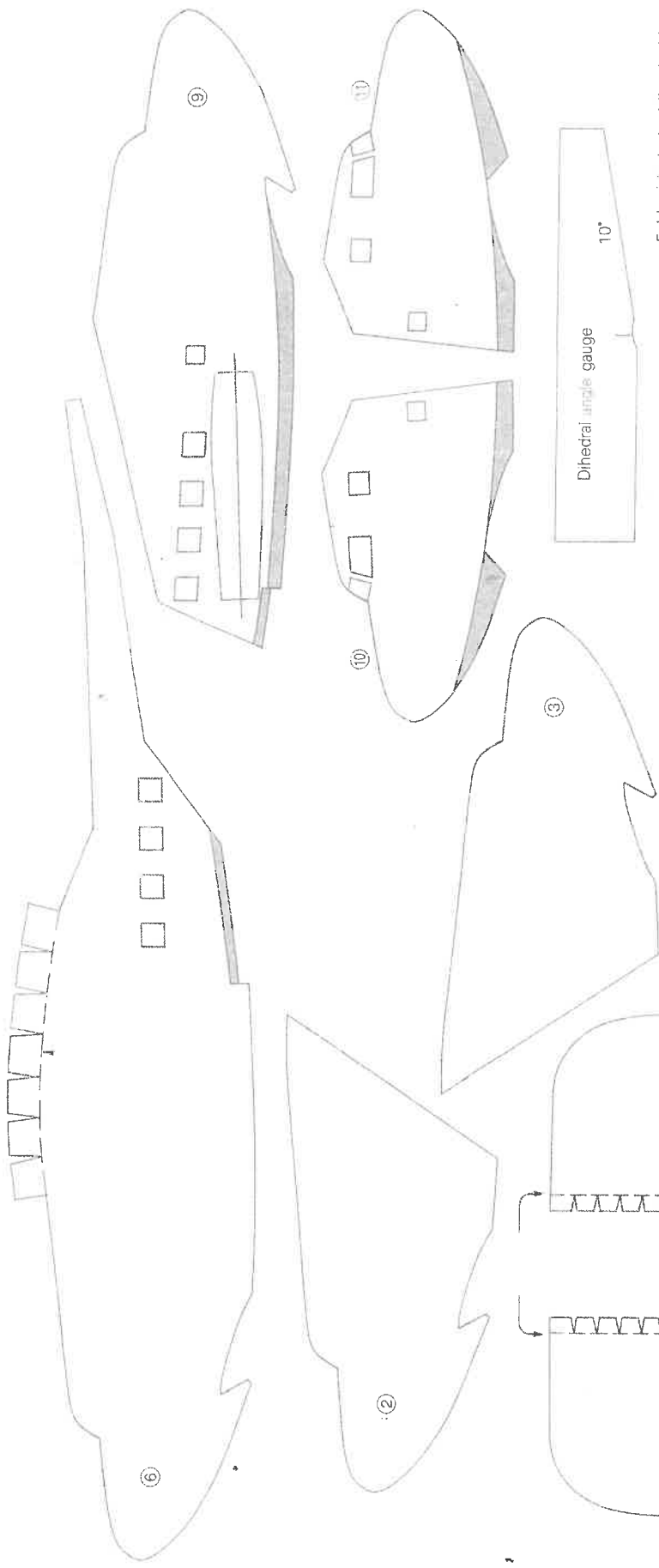
Putting folded stands under the main wing will be conducive to fast and thorough drying.



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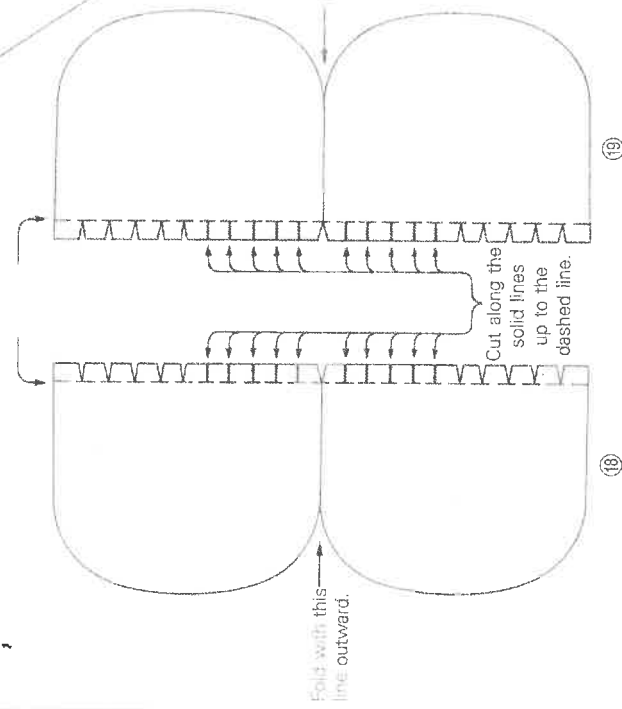




Dihedral angle gauge
10°

--- Fold with dashed line inside.
↑ Arrows point forward.

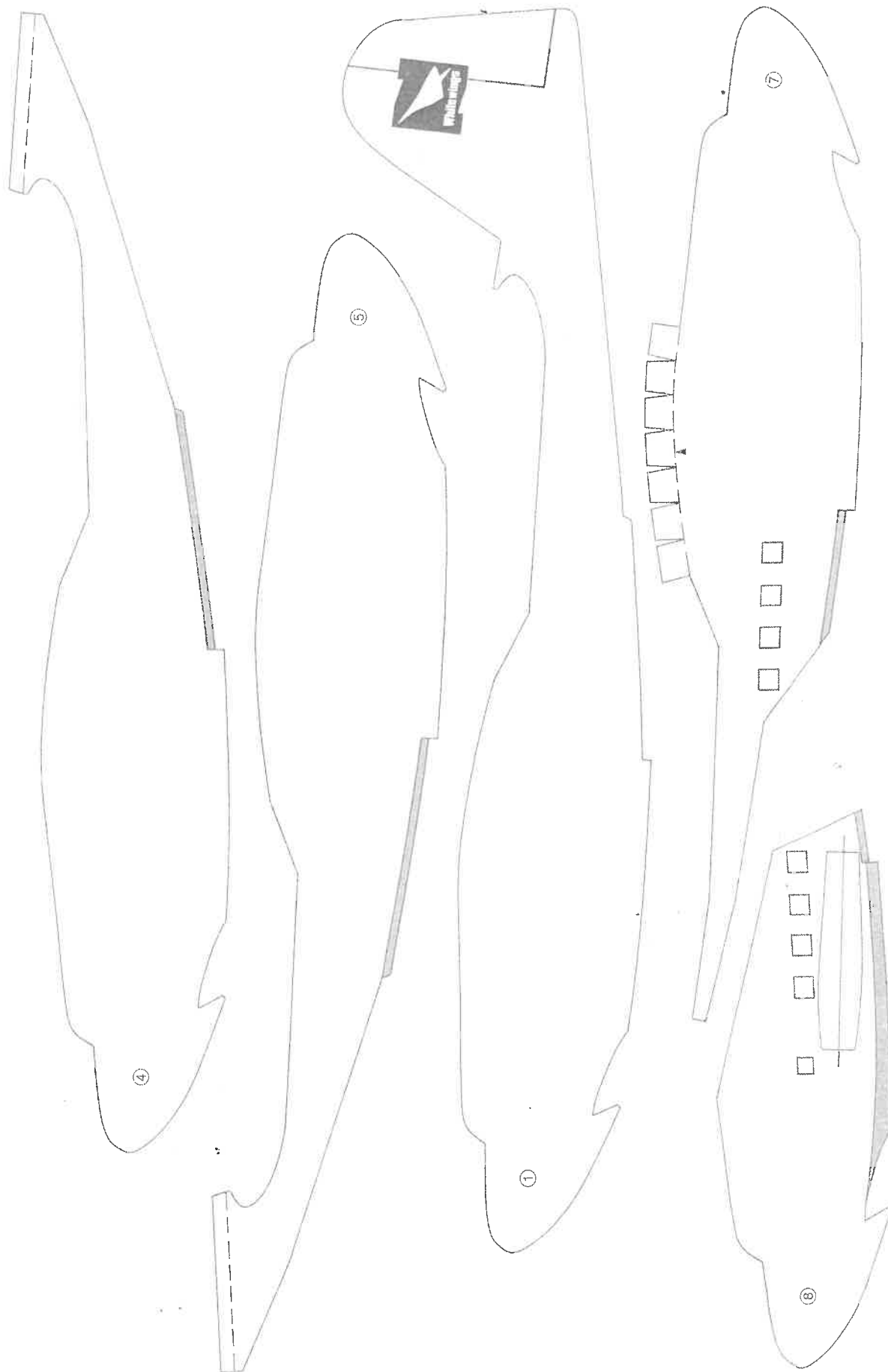
↕ Bend-resistant direction

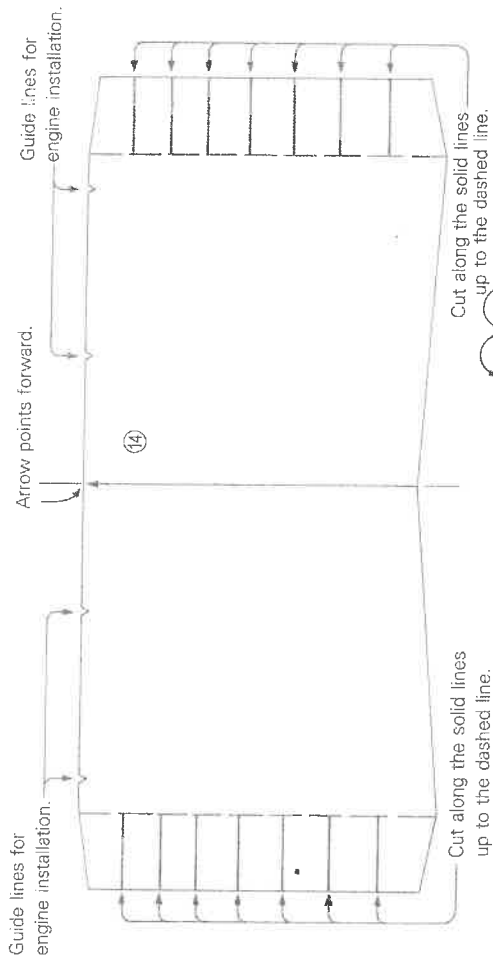


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Martin M-130 CHINA CLIPPER







Cut along the solid lines up to the dashed line.

Cut along the solid lines up to the dashed line.

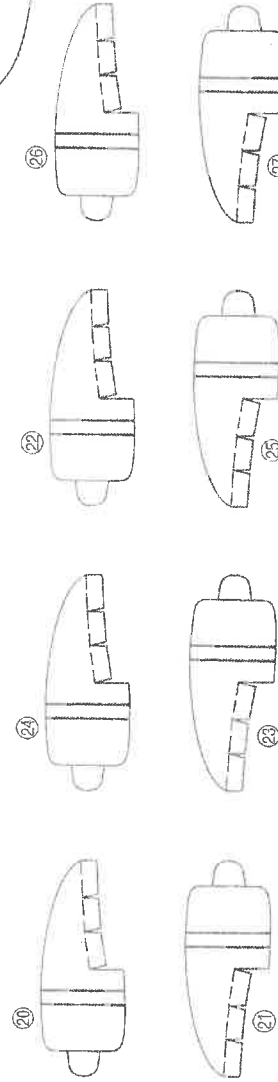
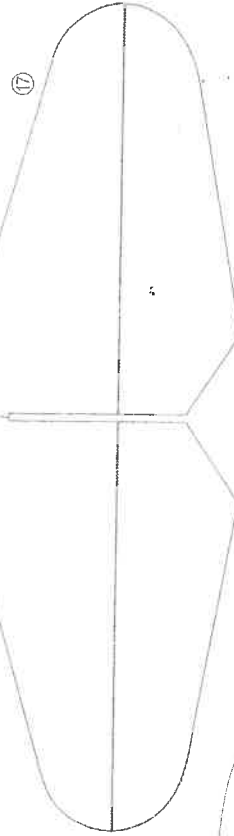
WhiteWings

Dois toward the front.

Fold with dashed line inside.
Arrows point forward.



Arrow points forward.



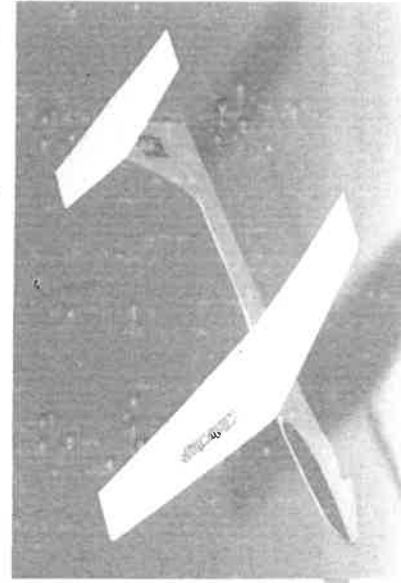
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Martin M-130 CHINA CLIPPER

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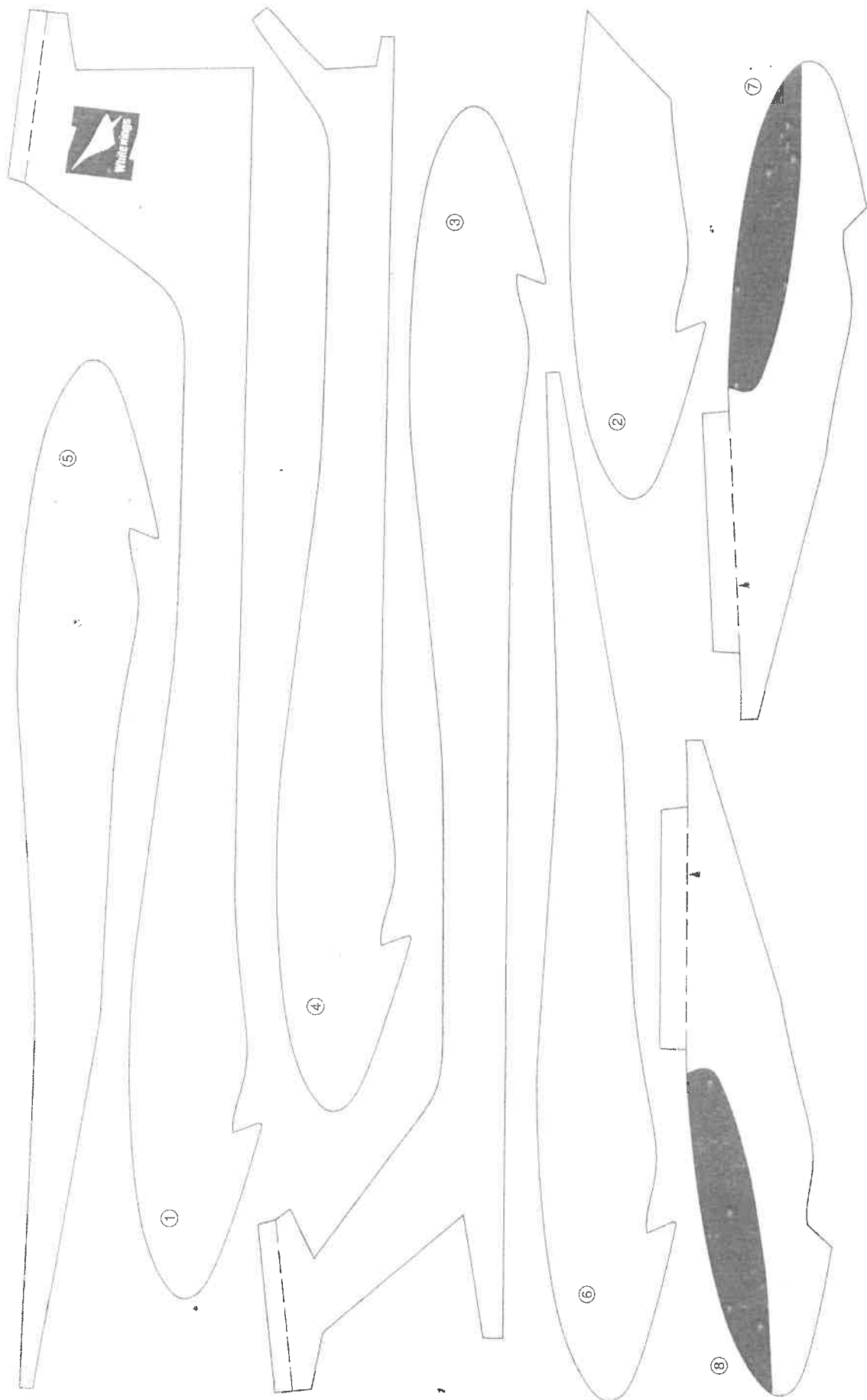
WhiteWings®

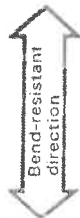
Racer 538 Wren



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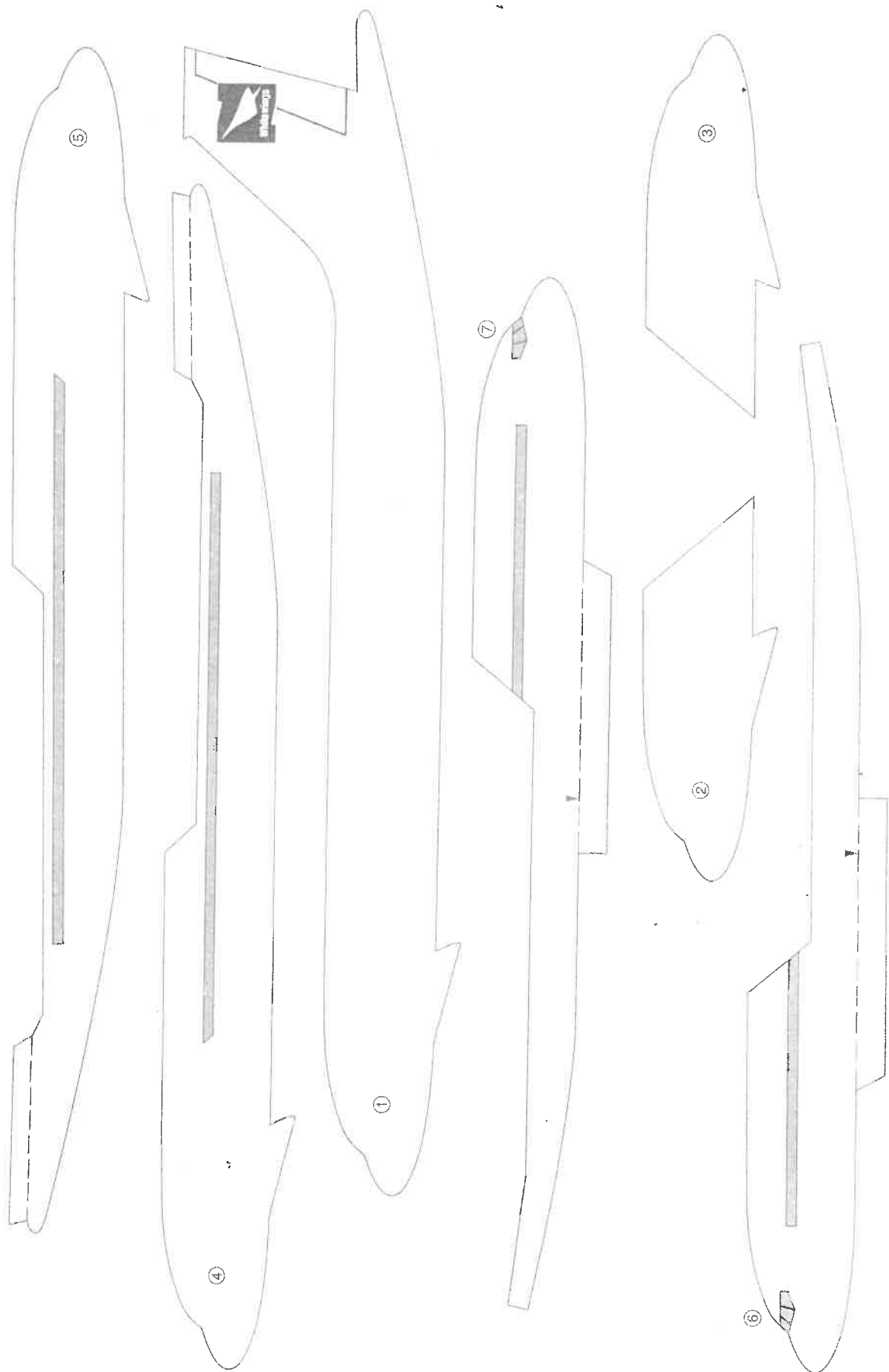


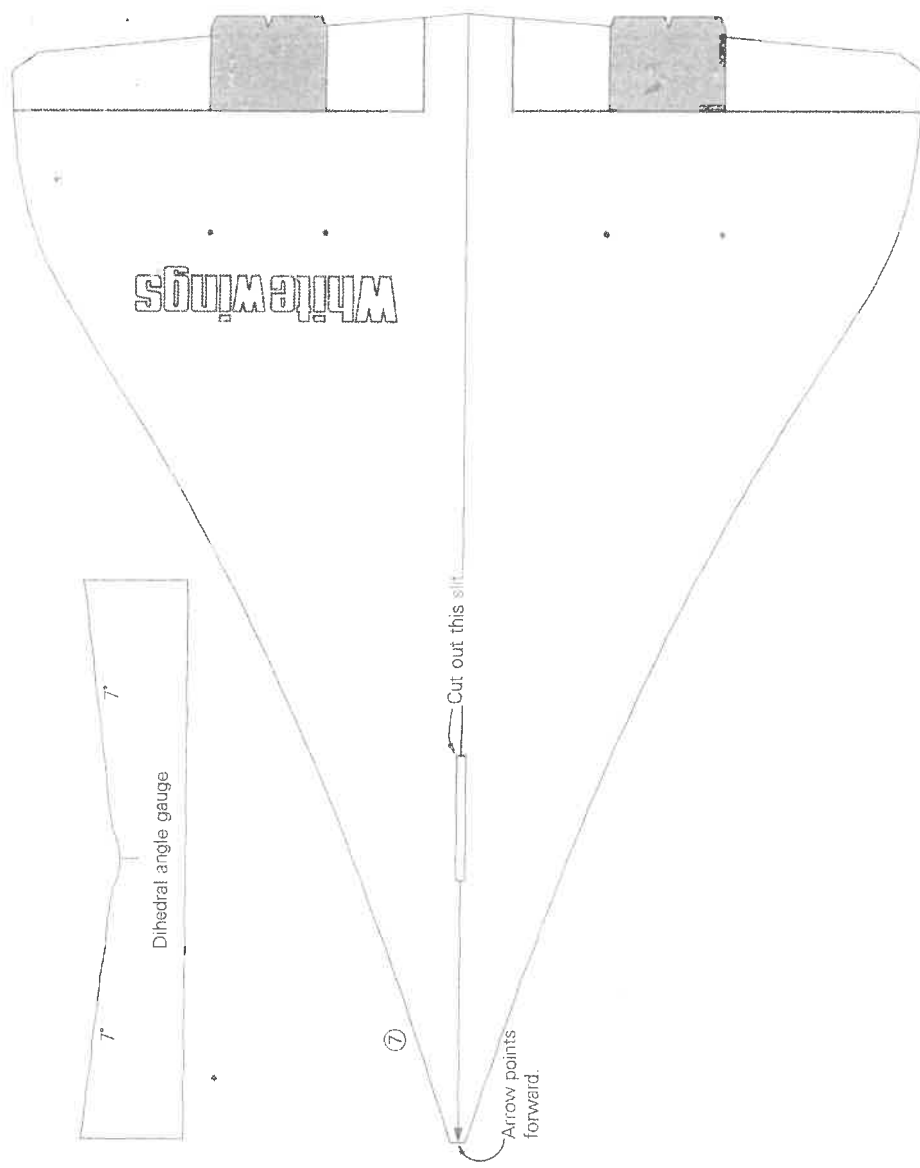




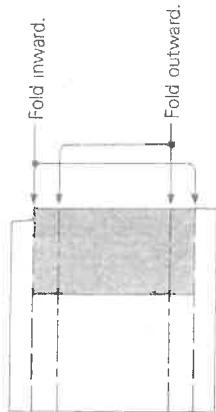
White Wings® De Havilland D.H. 89 DRAGON RAPIDE

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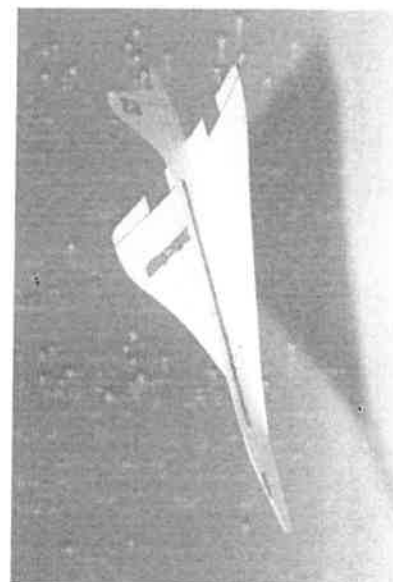
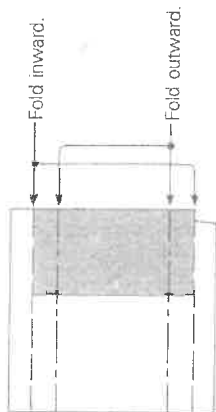




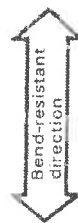
⑨-Right engine



⑧-Left engine

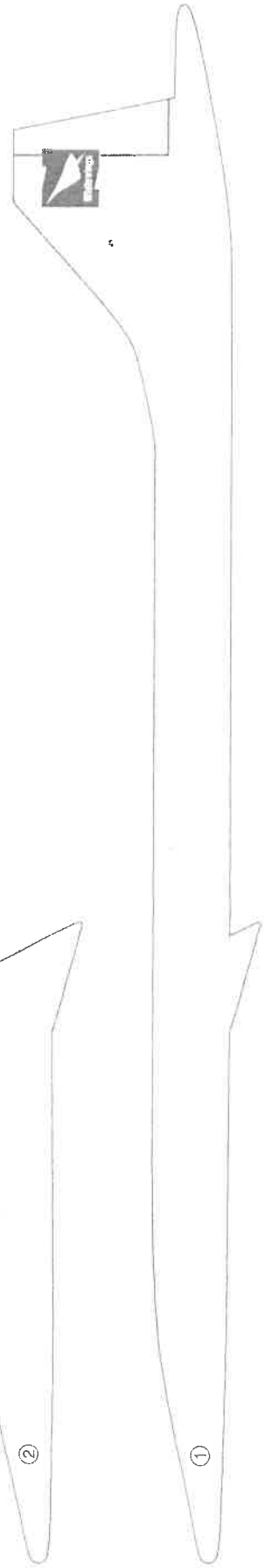
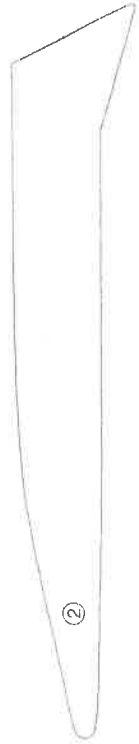
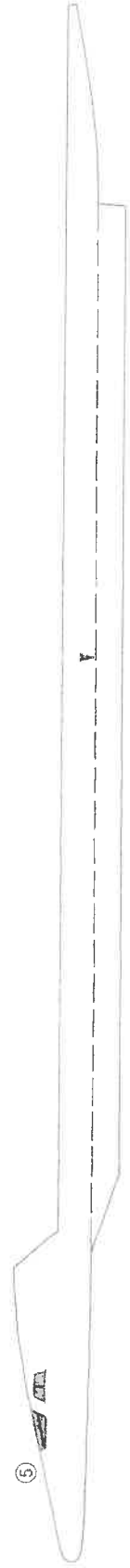


--- Fold with dashed line inside.
↑ Arrows point forward.



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--- Fold with dashed line inside.
 Arrows point forward.



Arrow points forward



WhiteWings

⑧

Arrow points forward

⑨

Fold the left winglet up along this line.

Fold the right winglet up along this line.

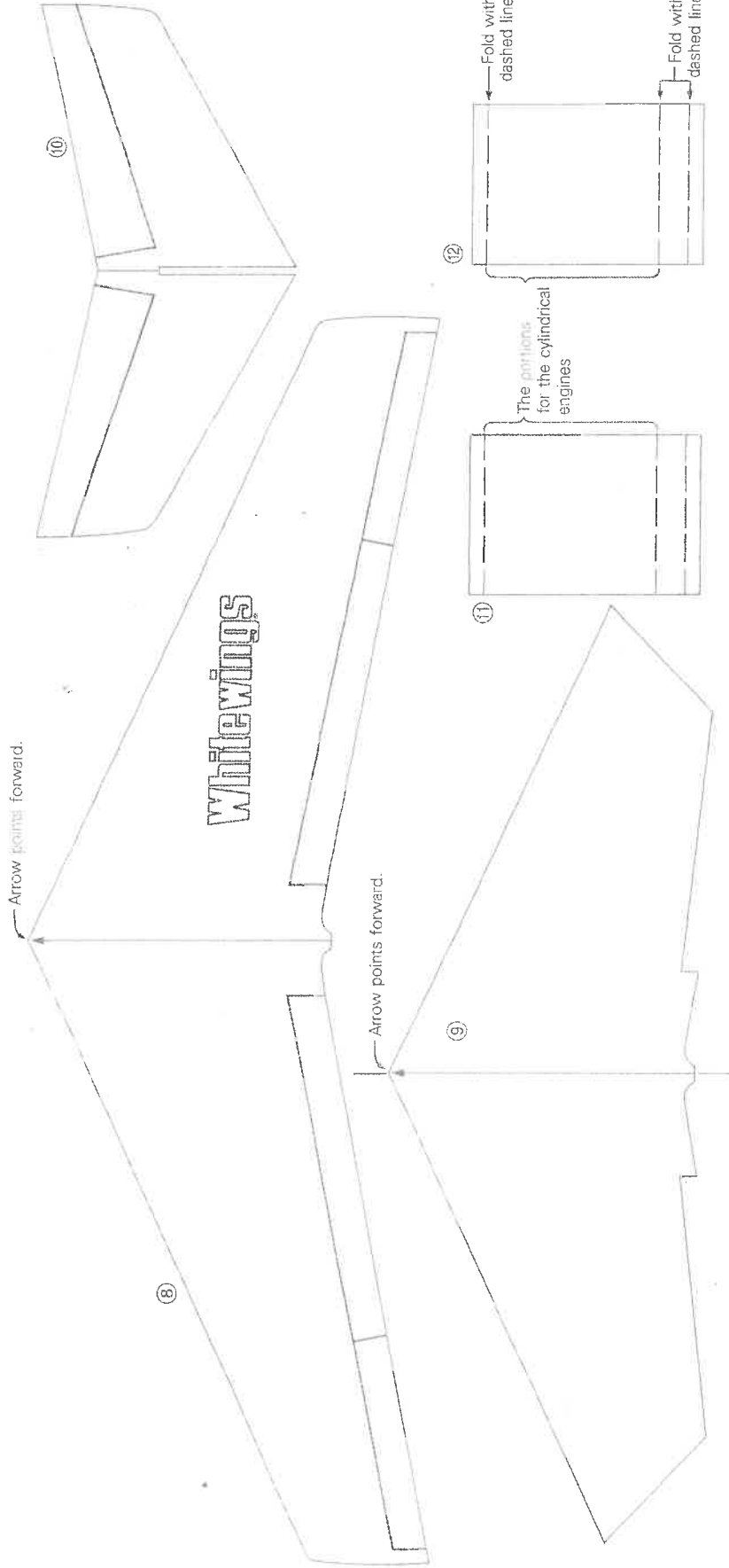
⑩

WhiteWings

Leading Large-scale
 Passenger Plane







⑪

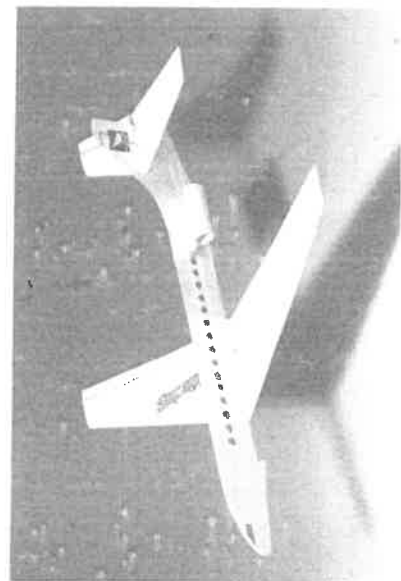
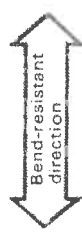


⑫



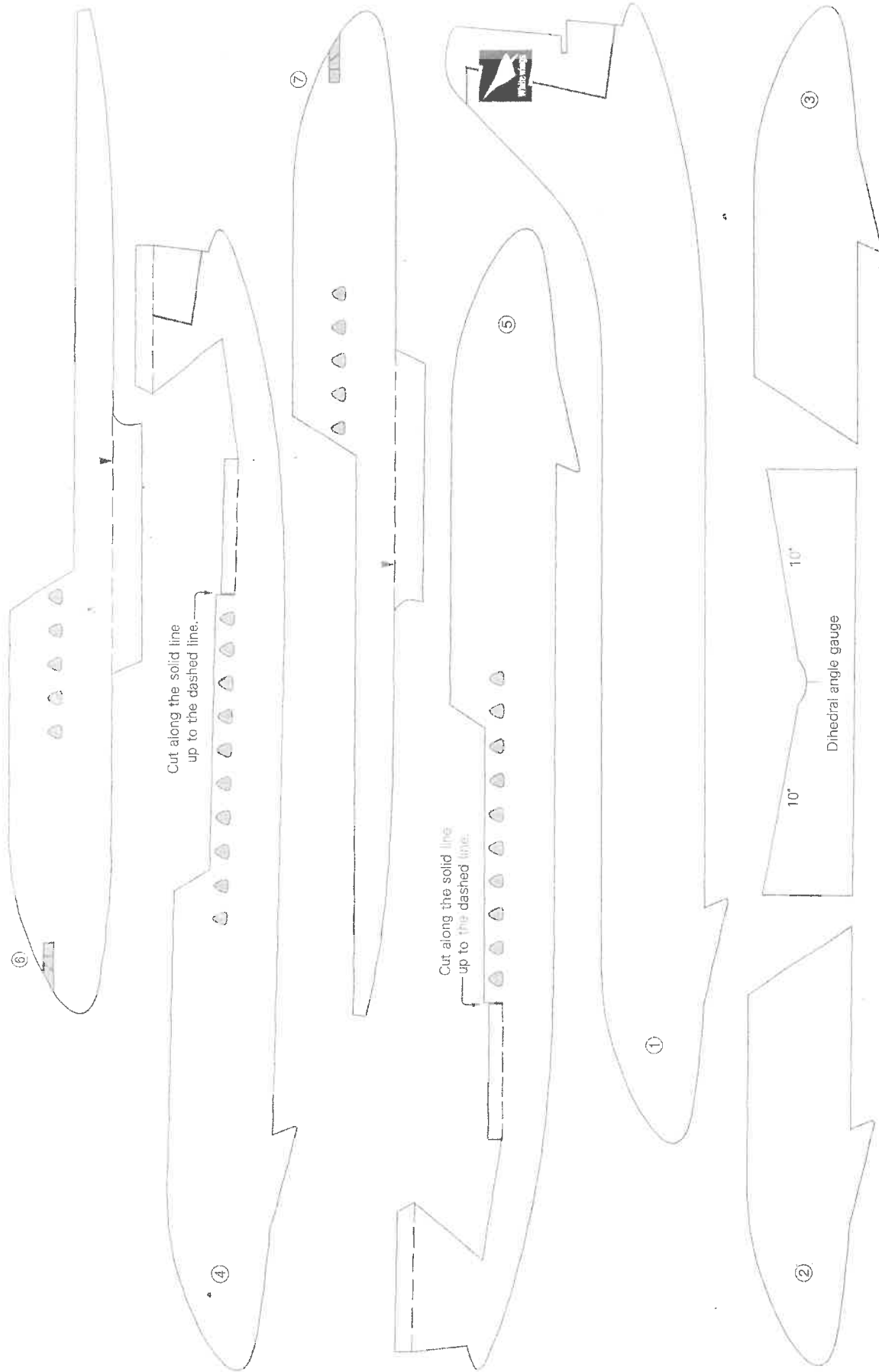
Fold with dashed lines inside

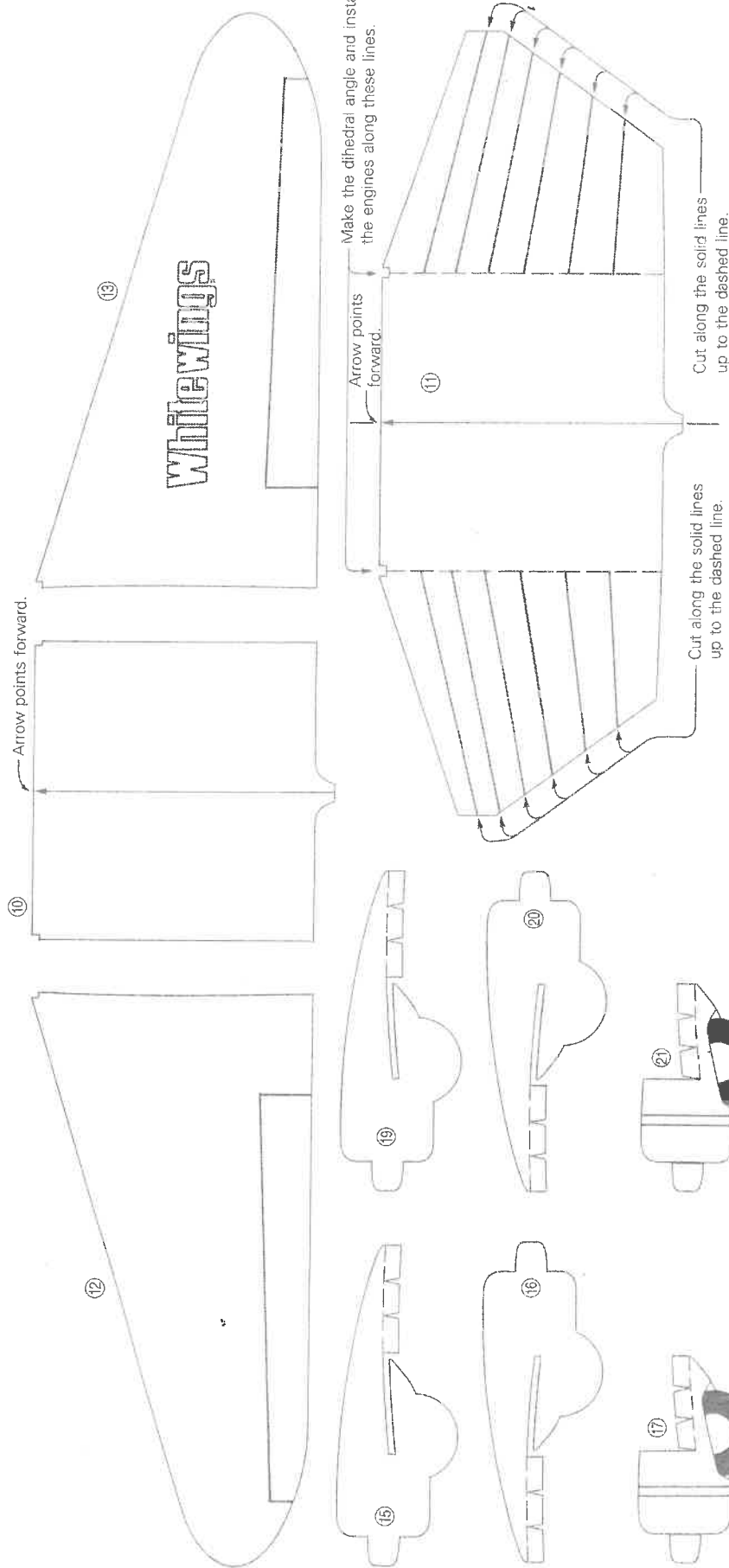
--- Fold with dashed line inside.
↑ Arrows point forward.



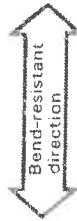
WhiteWings® Aérospatiale SE 210 CARAVELLE

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--- Fold with dashed line inside.
↑ Arrows point forward.



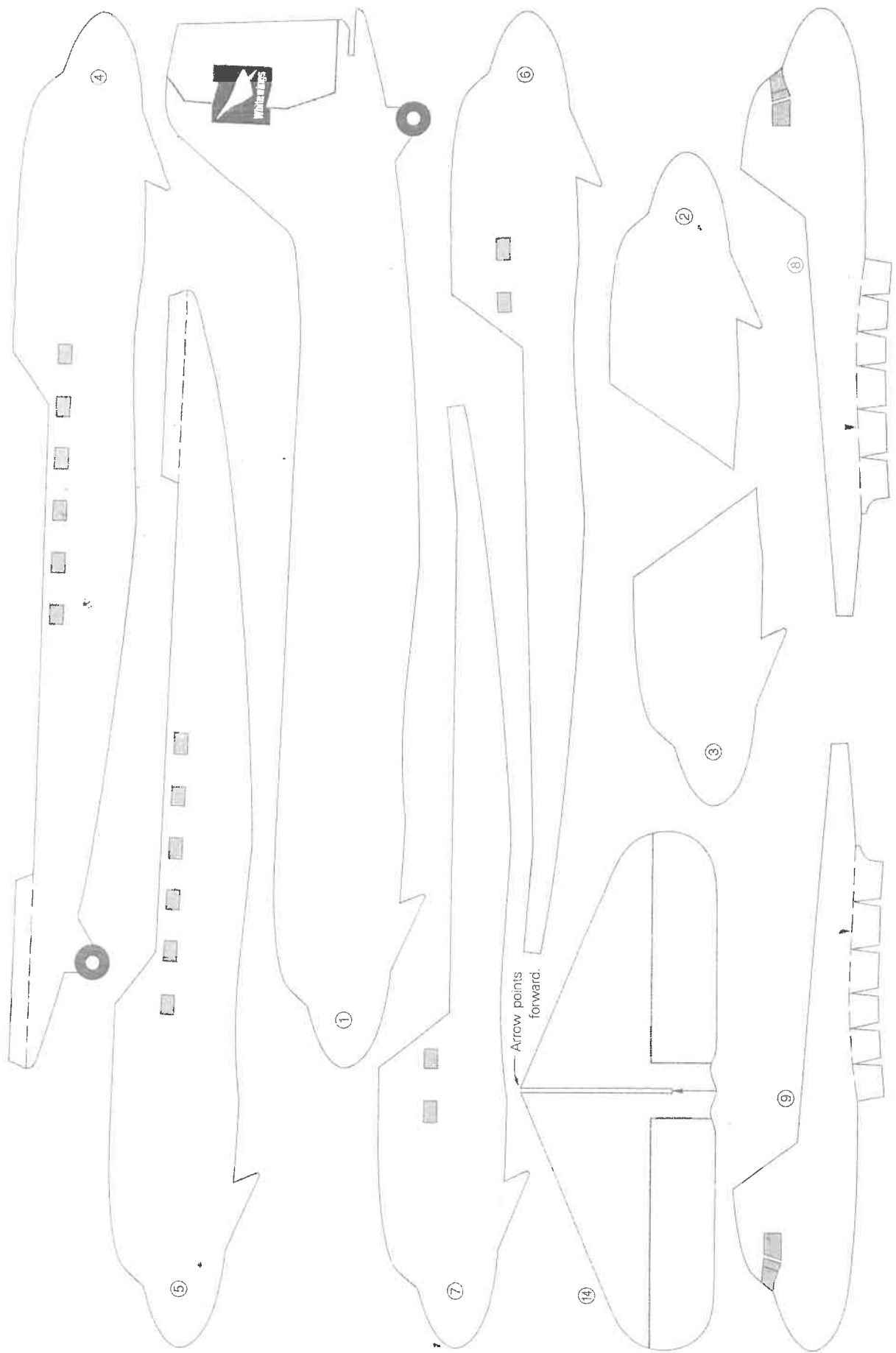
WhiteWings®

Douglas DC-3



Dihedral angle gauge

10"



④

⑥

②

⑧

①

③

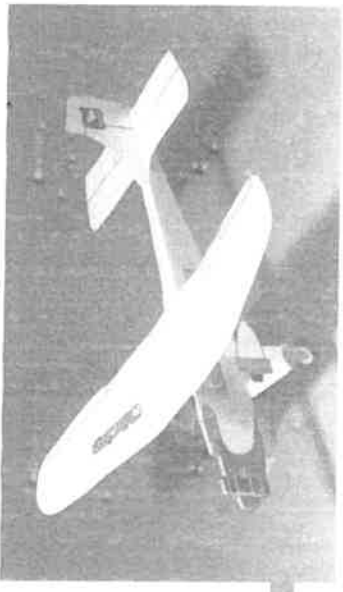
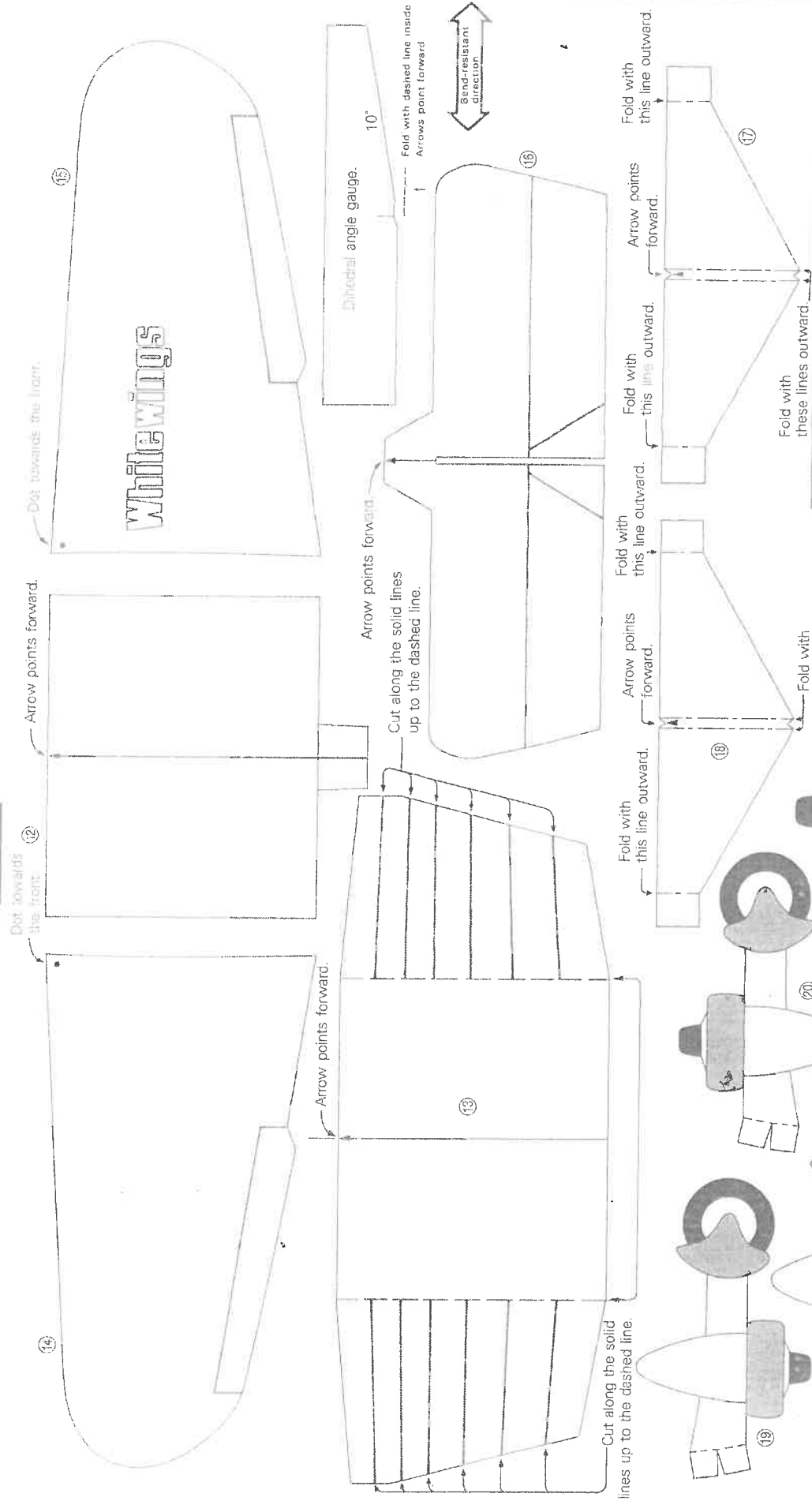
⑤

⑦

⑭

⑨

Arrow points
forward.

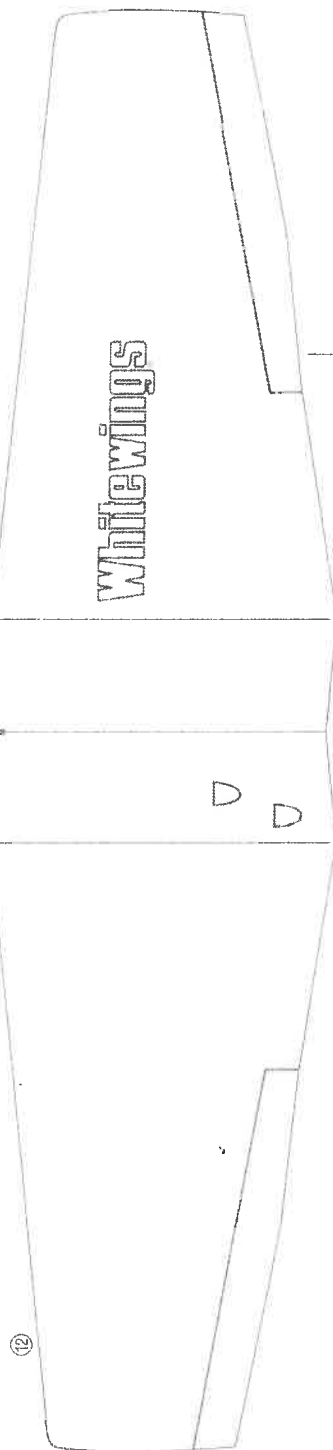
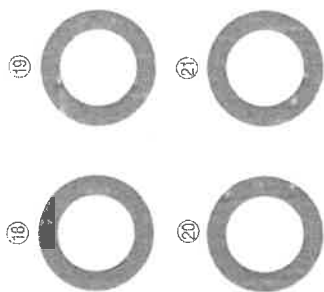


WhiteWings® Ford 5AT TRIMOTOR



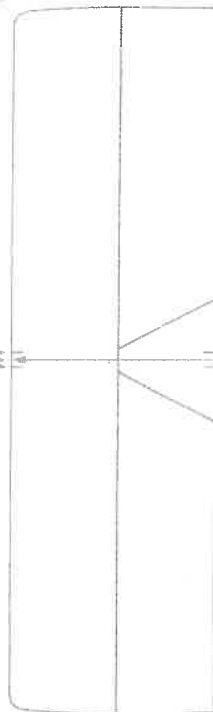
Arrow points forward.

Make the dihedral angle along this line.



13

Center guide lines Arrow points forward.



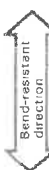
Gear gauge

Arrow points forward.

Fold with dashed line inside. Arrows point forward.



Fold with these lines outward. this line outward.



Arrow points forward.

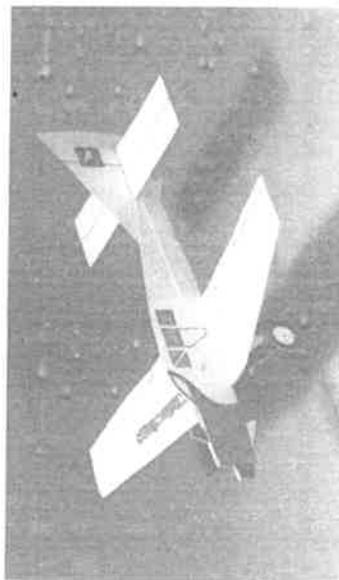


Fold with this line outward. this line outward. Fold with these lines outward.

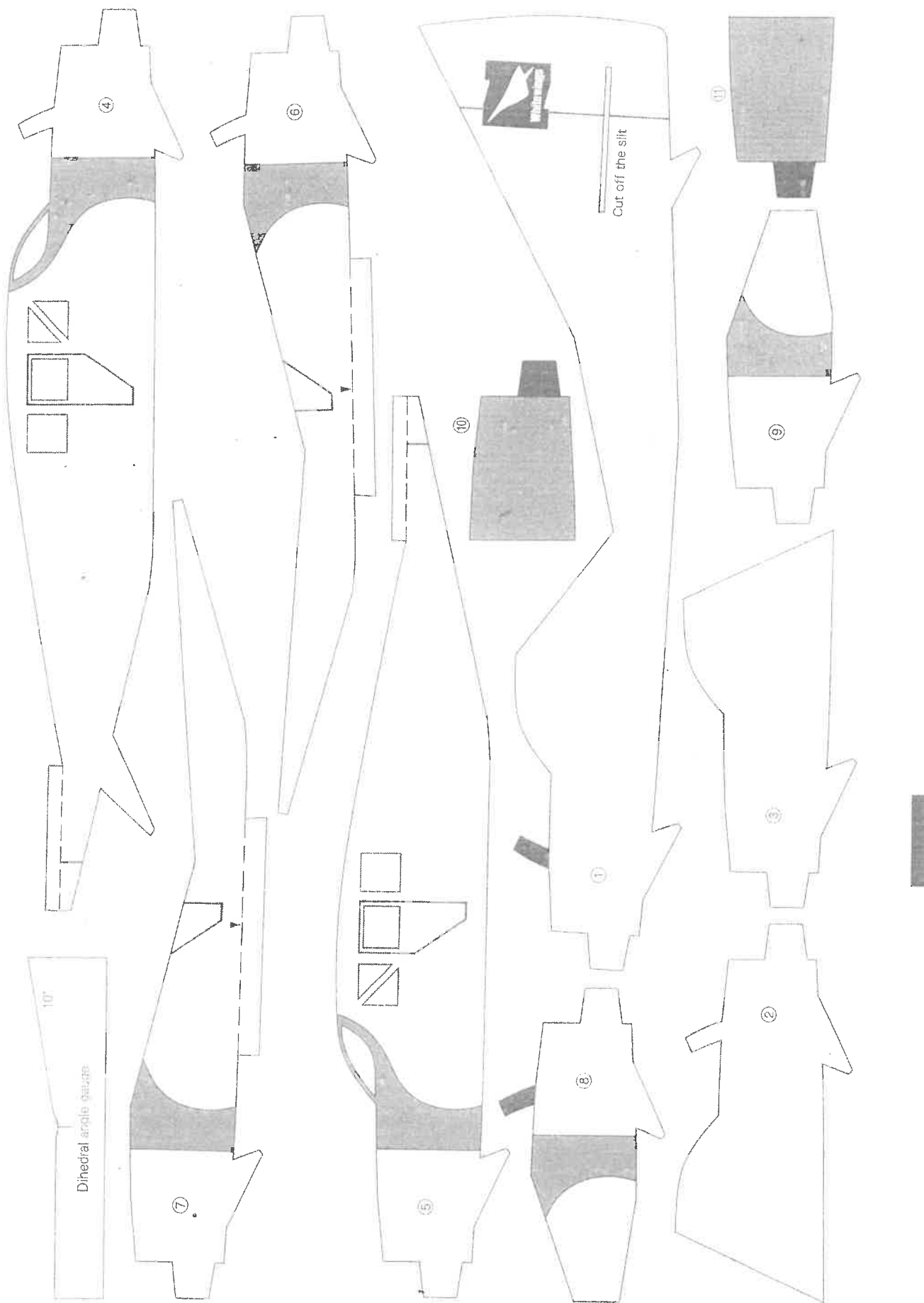
Arrow points forward.

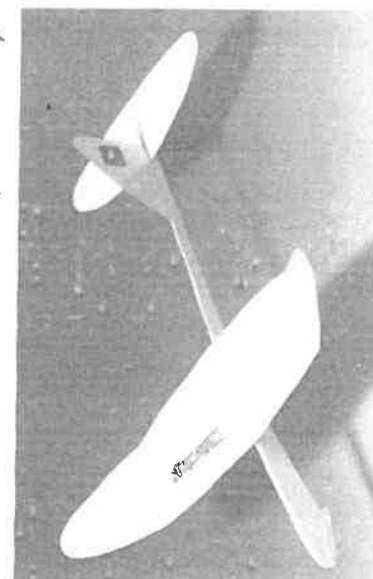


Fold with this line outward. this line outward. Fold with these lines outward.



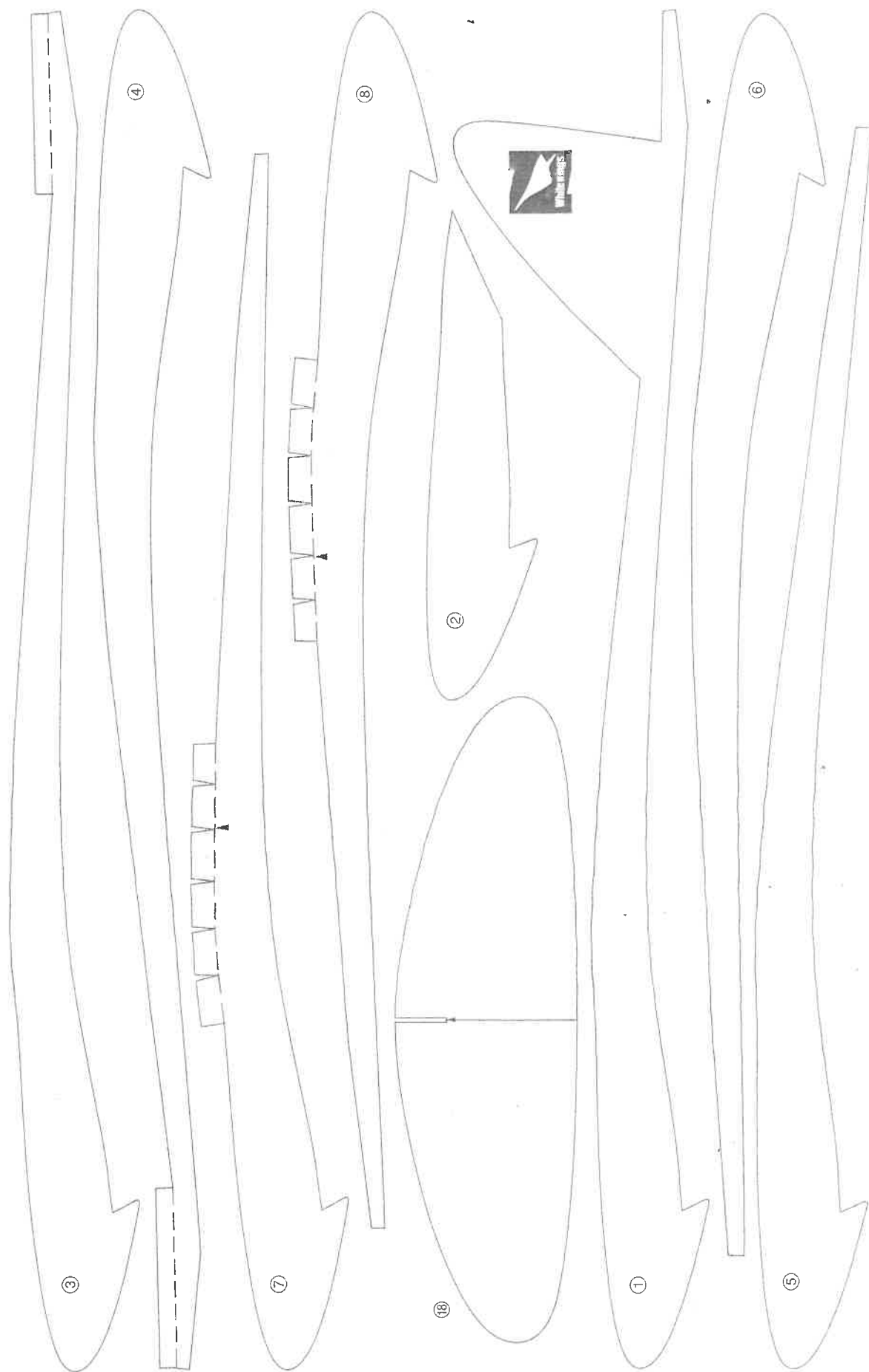
WhiteWings® Junkers F-13





WhiteWings®

Racer 539 Hawk

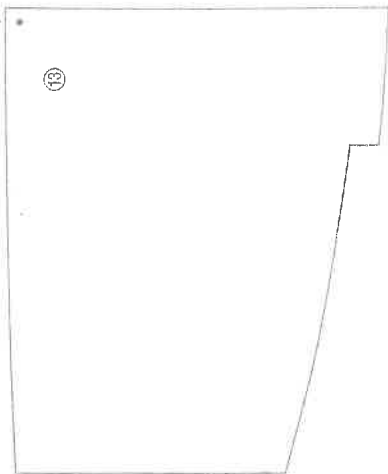


Arrow points forward.



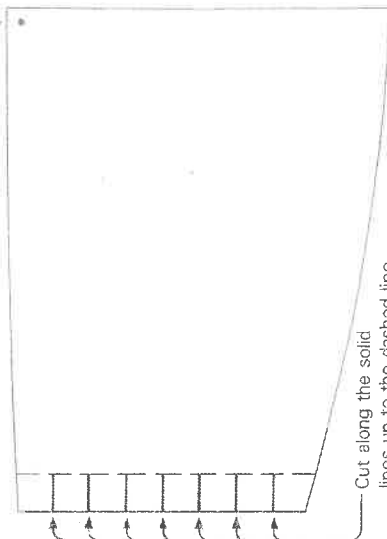
13

Dots toward the front.



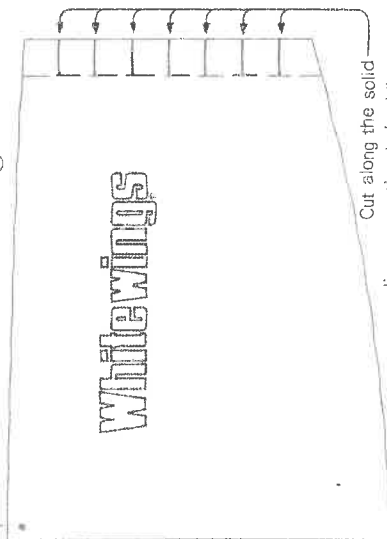
14

11



Cut along the solid lines up to the dashed line.

Dots toward the front.



Cut along the solid lines up to the dashed line.



Dihedral angle gauge

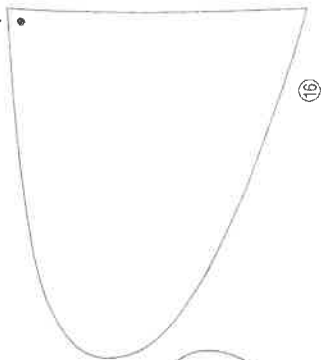
30°

5"

5"

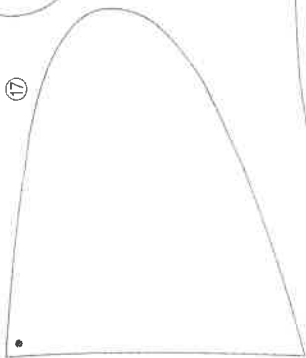
30°

Dot towards the front.

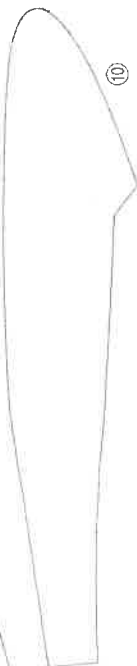


16

Dot towards the front.



17



10

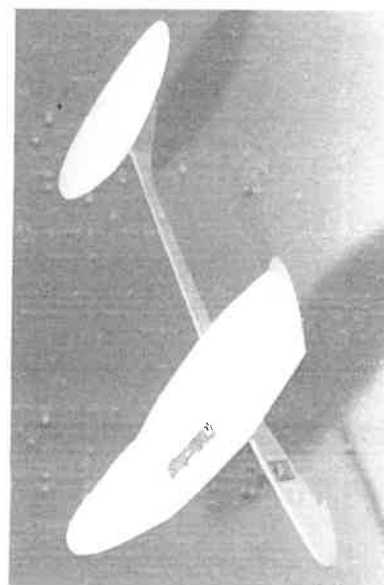


9

Fold with dashed line inside.
Arrows point forward.

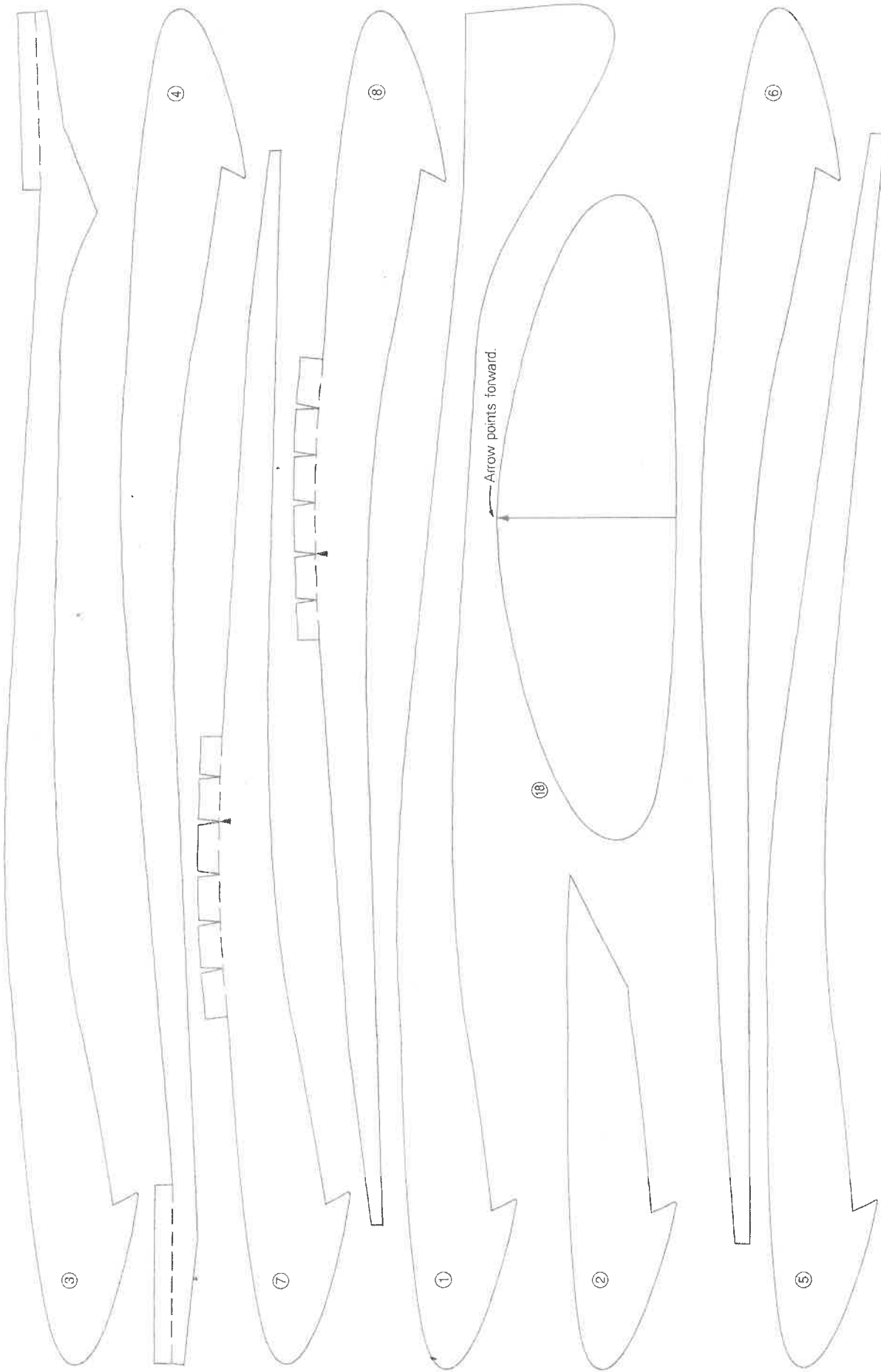


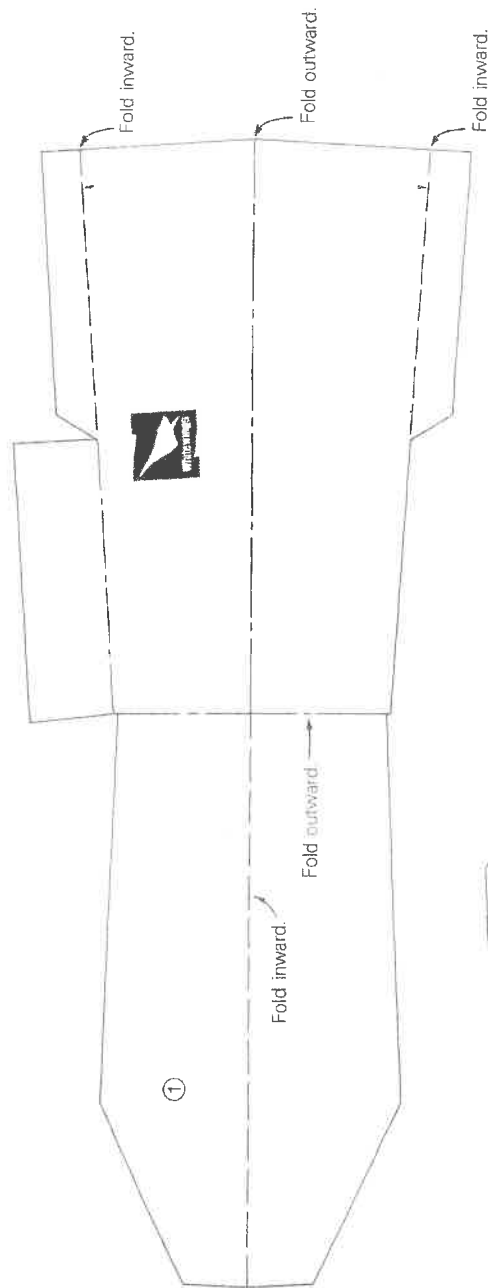
Bend-resistant direction



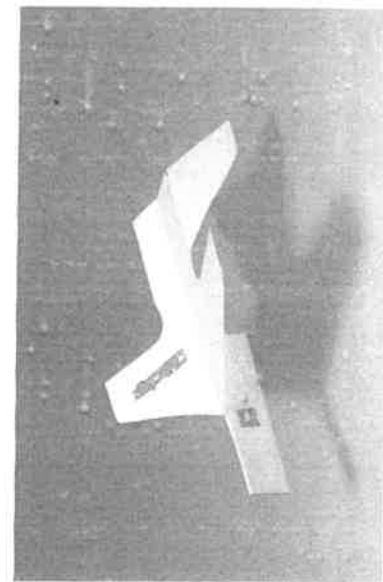
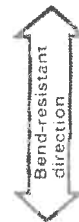
WhiteWings®

Racer 540 Crane

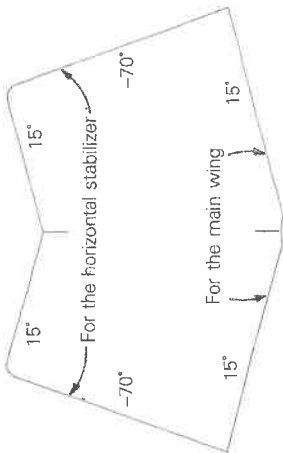
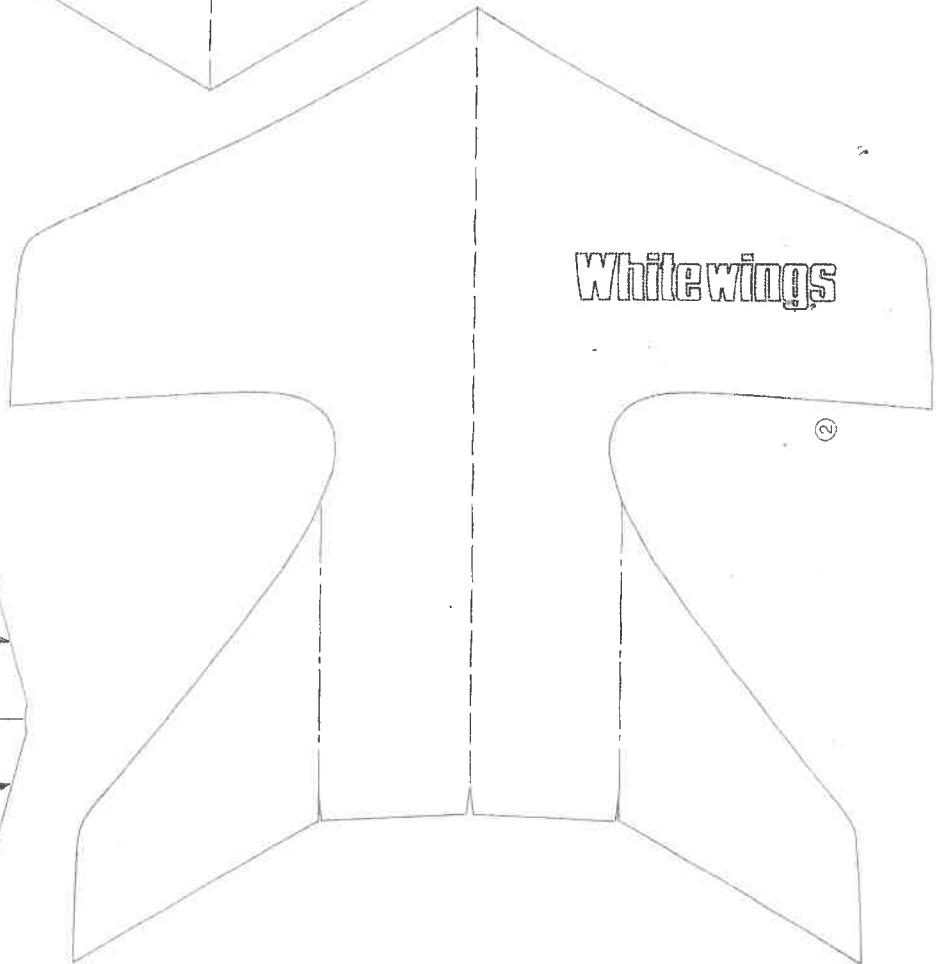
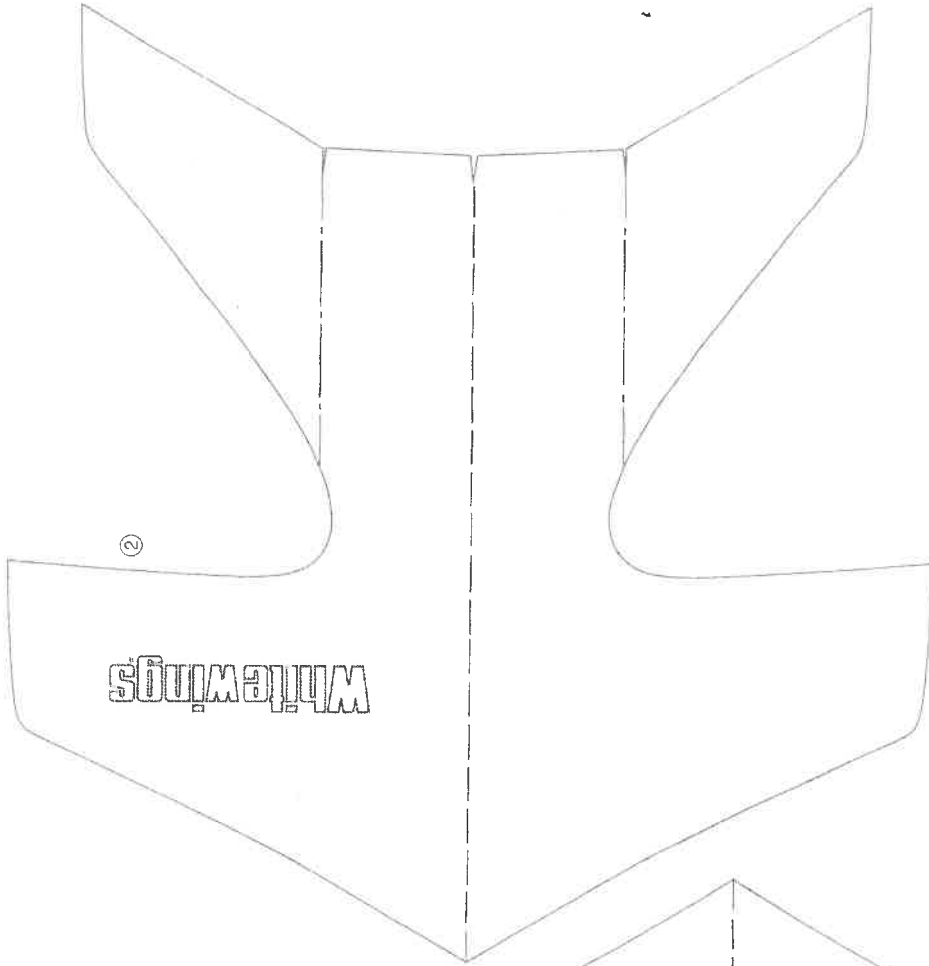


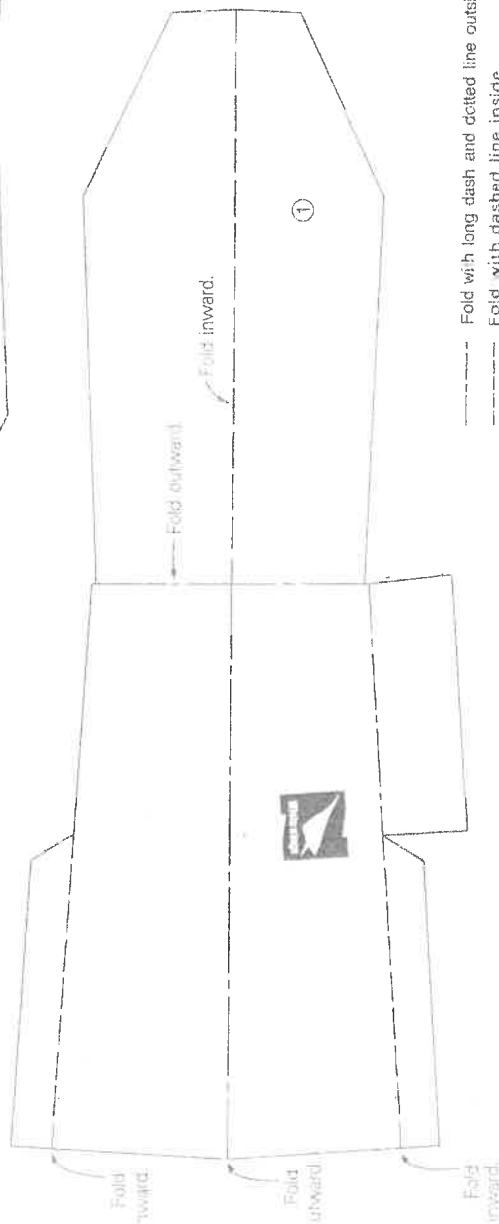
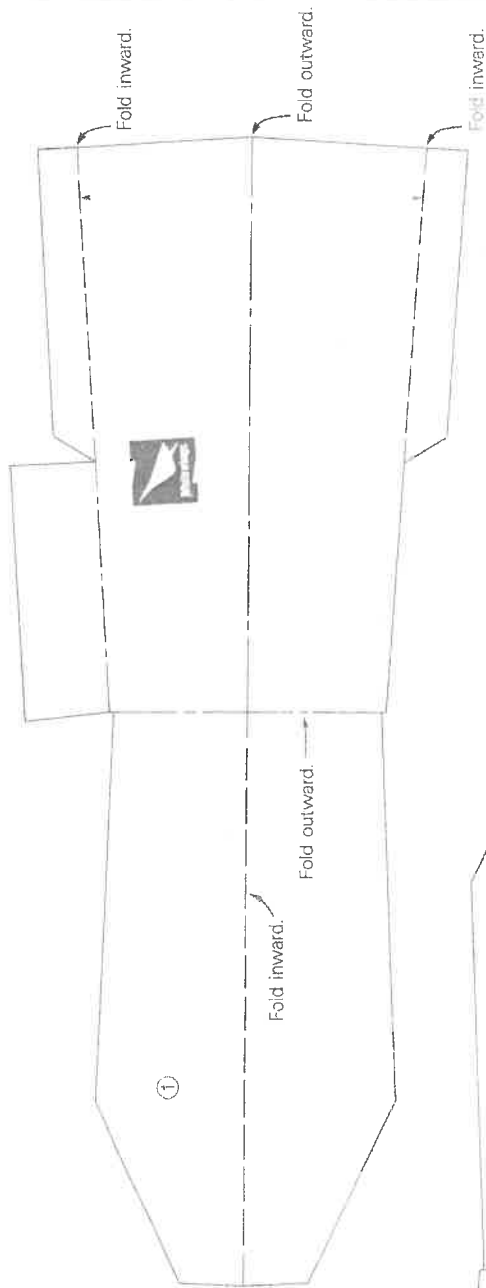


--- Fold with long dash and dotted line outside.
 --- Fold with dashed line inside.

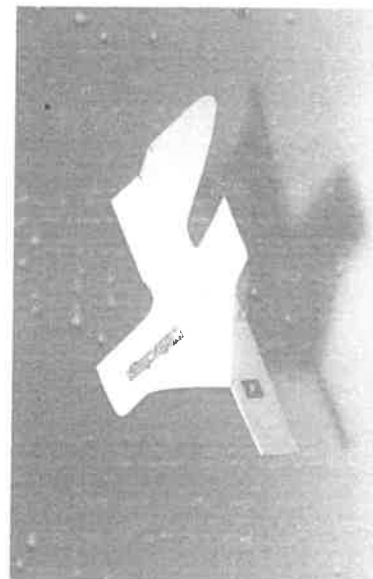


WhiteWings® Simple Plane 1





----- Fold with long dash and dotted line outside.
 ----- Fold with dashed line inside.



WhiteWings® Simple Plane 2

